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ARIZONA

HEALTH STATUS AND VITAL STATISTICS

1988

SPECIAL SECTION: Victims of Motor Vehicle Accidents And Their Injuries

ARIZONA DEPARTMENT OF HEALTH SERVICES
Office of Planning and Health Status Monitoring

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ARIZONA HEALTH STATUS
AND VITAL STATISTICS
1988

BY

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ARIZONA DEPARTMENT OF HEALTH SERVICES
Office of Planning and Health Status Monitoring
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INTRODUCTION

This publication by the Arizona Department of Health Services is the 1988 update of information on the health status of Arizona residents and vital statistics. Arizona Health Status and Vital Statistics 1988 provides readers with population-level data on trends in the health of Arizona residents. It is organized into major parts with several sections.

The first part is concerned with health status and the second is devoted to vital statistics. The series of tables presenting the data in each part are listed before the health status portion begins. This listing should aid readers with specific data needs.

The health status portion of the report has six sections that describe and summarize health trends from at least 1983 to 1988. The first section deals with natality, i.e. fertility and birth rates, the general health of newborns as indexed by birthweight and prematurity, and some demographic and prenatal care characteristics of the women giving birth.

The second or total mortality section compares the age-adjusted profile of leading causes of death for Arizona residents with the profile for United States residents. Gender and county differences in total and cause-specific age-adjusted mortality rates also are examined for Arizona. The third section addresses age-specific mortality. The five leading causes of death are discussed for infants, children (1-14 years), adolescents (15-19 years), young adults (20-44 years), middle-aged adults (45-64 years) and the elderly (65 or more years). For each age group, cause-specific mortality is compared between urban (i.e., Maricopa and Pima counties) and rural (i.e., all other counties) regions and between genders. Urban and rural regions also are compared in gender-specific total mortality.

The fourth or special section is devoted to a health issue of special concern. Motor vehicle injuries was selected as the topic for the 1988 special section because Arizona's vehicular fatality rate has exceeded the U.S. rate for more than a decade and these injuries are a major cause of premature death, especially among rural Arizonans. The victims of these fatal injuries are described more fully. In addition, an exploratory study was conducted using a source of injury morbidity data which became available for the first time during the preparation of this report. The study describes the types of bodily trauma suffered by victims of vehicular events who were admitted as inpatients to one hospital with a trauma center in the state. Hospital costs and some consequences of vehicular-inflicted trauma are delineated. This section gives a fuller description of the motor vehicle injury problem in Arizona than was available previously and suggests some new targets for prevention programs. However, it also indicates the many gaps in our knowledge about the outcomes to people injured in a vehicular incident.

Morbidity, levels of disease and disability in the population, is the topic of the fifth section. The discussion is limited to data on diseases and/or disabilities reported for the 1988 population of the state because of legal requirements. Health status concludes with a summary of trends that represent either improvements or deteriorations in health status. A trend had to occur over several years to qualify as an indicator of either progress or a problem in health status. Trends are particularly important if they are indicative of an increasing risk of premature death or disability in the population.

The second part of the report contains vital statistics information with no accompanying narrative. Tables in six sections give data on 1) population composition; 2) births; 3) maternal, perinatal and infant mortality; 4) deaths; 5) marriages and divorces; and 6) pregnancies and abortions. Vital statistics used for health status are found in part one.

DATA SOURCES, LIMITATIONS AND DEFINITIONS

SOURCES OF DATA

Information on births, deaths and fetal deaths is compiled from the original documents filed in the Arizona Department of Health Services, Office of Vital Records, and from transcripts of original certificates filed in other states but affecting Arizona residents. (Copies of certificates for births, deaths and fetal deaths occurring to Arizona residents outside the United States are not sent to Arizona). Information on abortions performed on Arizona women is compiled from reports sent to the Arizona Department of Health Services by facilities within but not outside the state. Pregnancies are the sum of live births, spontaneous terminations of pregnancy (fetal deaths or stillbirths) and induced terminations of pregnancy (abortions). Arizona has no central registry for marriage or divorce records. Statistics are limited to counts of marriages and divorces reported monthly by the Clerk of the Superior Court of each county in which the marriage or divorce occurred. These reports contain no personal or demographic data on the people marrying or divorcing.

POPULATION

Population estimates, used to calculate rates, are from the Population Statistics Unit in the Arizona Department of Economic Security and the U.S. Census Bureau.

RELIABILITY OF RATES

Many rates shown in this report are based on a small population, a small number of events, or both. Rates based on small numbers are unreliable and thus should be used with caution. Rates for many counties also vary considerably from year to year due to small populations and few events. In addition, no adjustments for differences in the distribution of age or other demographic variables have been made to the rates given in the Vital Statistics portion of this report. Therefore, caution must be exercised when forming conclusions on the basis of these crude or non-adjusted rates.

DEFINITIONS

Occurrence data - data compiled by the place where the event occurred, regardless of the person's place of residence.

Residence data - data compiled by the person's usual place of residence without regard to the geographical place where the event occurred.

Terms related to natality

Total Births - Total live births.

Live Birth - The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy which, after such expulsion or extraction, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Birth Weight - Weight of fetus or infant at time of delivery.

Low-Weight Birth - Live births who weigh 2,500 grams or less (approximately 5 lbs., 8 ozs.) at delivery.

Birth Rate - Number of live births per 1,000 population.

Age-Specific Birth Rate - Number of live births to women in specific age group per 1,000 estimated female population in that age group.

Low-Weight Birth Rate - Number of live births weighting 2,500 or less grams (5 lbs., 8 ozs.) per 1,000 births.

General Fertility Rate - Total number of live births per 1,000 women of childbearing age (15-44 years).

Total Fertility Rate - The sum of each age-specific live birth rate multiplied by the number of years in the age group.

Pregnancies - The sum of live births, fetal deaths and abortions.

Pregnancy Rate - Number of pregnancies per 1,000 females of childbearing age.

Age-Specific Pregnancy Rate - Number of pregnancies to women in specific age group per 1,000 estimated female population in that age group.

Natural Increase - The excess of births over deaths.

Natural Increase Rate - The excess of births over deaths per 1,000 population.

Abortion - An induced termination of pregnancy with an intention other than to save a live fetus is the only abortion event reported to the Arizona Department of Health Services. Spontaneous abortions or expulsions of a nonviable fetus of less than 20 weeks gestation are not reported.

Abortion Rate - Number of reported abortions per 1,000 females of childbearing age.

Age-Specific Abortion Rate - Number of reported abortions to females in a specific age group per 1,000 female population in that age group.

Terms related to mortality

Underlying Cause of Death - That condition giving rise to the chain of events leading to death. All causes of death are coded in accordance with the International Classification of Diseases, Ninth Revision adapted for the use in the United States (ICD).

Fetal Death - Death prior to the complete expulsion or extraction from its mother of a product of conception that has reached at least 20 weeks of gestation. The death is indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Neonatal Death - Deaths occurring to infants less than 28 days of age.

Postneonatal Death - Deaths occurring to infants at least 28 days of age but under one year of age.

Infant Death - Deaths occurring to infants less than one year of age or the sum of neonatal deaths and postneonatal deaths.

Crude Death Rate - Number of deaths per 100,000 population.

Cause-Specific Death Rate - Number of deaths from a specific cause per 100,000 population.

Age-Specific Death Rate - Number of deaths in a specific age group per 100,000 population in that age group.

Age-Adjusted Death Rate - Total mortality and cause-specific death rates are age-adjusted using the direct method by multiplying the mortality rate for each age group within a population grouping by the population of that age group within a standard population. The standard population used was the population of the United States in 1940, the same standard population used by the National Center of Health Statistics. The sum of these results for each of these age groups for a given population is the age-adjusted rate. The age-adjusted rate is expressed as a rate per 100,000 population.

Fetal Death Rate - Number of reported fetal deaths per 1,000 live births.

Infant Death Rate - Number of deaths under one year of age per 1,000 live births.

Neonatal Death Rate - Number of deaths under 28 days of age per 1,000 live births.

Postneonatal Death Rate - Number of deaths between 28 days of age and one year of age per 1,000 births.

Maternal Death Rate - Number of deaths due to complications of pregnancy, childbirth or the puerperium (ICD 630-676) per 100,000 live births.

Ethnicity - In previous years, persons of Spanish/Hispanic origin were classified as "White." However, the Arizona birth and death certificates record Hispanic origin for all races which permits differentiation of persons classified as "White," "Black," "Native American" or "Asian" into those who simultaneously are or are not of Hispanic origin.

Starting in 1978, Yaqui Indians were no longer classified as White but Native American. The Native American figures include those living both on and off the reservation.

Entries of "unknown" and "not specified" race/ethnicity on birth or death certificates occur rarely, i.e. less than 0.1 percent. For this reason, they are included in the natality or mortality data with the modal category of "White" unless stated otherwise. Ethnicity of mother, father or descendant is as stated on certificate. Ethnicity of infant is determined from ethnicity of the parent(s) using classification procedures established by the National Center for Health Statistics.

CLASSIFICATION OF CAUSE OF DEATH

The cause of death used in this report is the underlying cause classified according to the International Statistical Classification of Diseases, Injuries, and Causes of Death. Listed below are categories, International Classification of Disease (ICD) codes, and examples of specific diseases for selected causes of mortality discussed in this report. The numbers are the codes from the ICD classification (Ninth Revision, 1975) which cover that cause of death.

Cause of Death Category	ICD Code(s)	Examples
Infectious and parasitic diseases	001-041, 045-139 *042- 044	Tuberculosis, septicemia, viral hepatitis, coccidioidomycosis, human immunodeficiency virus (HIV) infection
Malignant neoplasms	140-208	Lung cancer, leukemia, breast cancer, colon cancer
Diabetes mellitus	250	Diabetes with coma, diabetes with ophthalmic manifestations, diabetes with renal manifestation
Alcoholism	291, 303 571.0-571.3	Alcoholic psychoses, alcohol dependence syndrome, cirrhosis of liver
Diseases of heart	390-398, 402 404-429	Myocardial infarction, hypertensive heart disease, cardiomyopathy, cardiac dysrhythmias
Cerebrovascular diseases (stroke)	430-438	Intracerebral hemorrhage, occlusion of cerebral arteries
Atherosclerosis	440	Atherosclerosis of aorta, atherosclerosis of renal artery
Other diseases of the arteries	441-448	Aortic aneurysm, arterial embolism and thrombosis, polyarteritis nodosa, diseases of capillaries
Pneumonia and influenza	480-487	Viral pneumonia, bronchopneumonia, pneumococcal pneumonia, influenza
Chronic obstructive pulmonary disease (COPD)	490-496	Bronchitis, emphysema, asthma, bronchiectasis, allergic alveolitis
Congenital anomalies	740-759	Heart defects, anencephalus, anomalies of respiratory system, anomalies of central nervous system
Certain conditions originating in perinatal period	760-779	Maternal hypertensive disorders, slow fetal growth and fetal malnutrition, birth trauma, disorders relating to short gestation and low birthweight
Symptoms and ill-defined conditions	780-799 798.0	General symptoms, nonspecific abnormal findings, ill-defined and unknown causes of mortality, sudden infant death syndrome
Unintentional injuries from accidents	800-949	Poisoning, falls, motor vehicle accidents, fatalities due to natural and environmental factors
Motor vehicle	810-825	
Drowning	830,832,910,984	
Suicide	950-959	
Homicide	960-969	

* Codes introduced by the National Center for Health Statistics in January 1987.

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PART I: HEALTH STATUS

NATALITY

The increase in the number of babies born to Arizona residents from 63,320 in 1987 to 65,544 in 1988 was too small to maintain the 1988 birth rate at the 1987 level (Table 1-1). However, the 1988 Arizona birth rate of 18.2 per 1,000 population was still 14 percent greater than the 1988 U.S. rate of 15.9 per 1,000. One baby was born for every 63 residents in the nation compared to one birth for every 55 Arizona residents.

Among the 15 counties, only the 1988 birth rate for Yuma county was the highest of the past six years (Table 1-1). Birth rates were lower in 1988 than in 1983 for all counties except Yuma, Santa Cruz and Maricopa. The 1988 birth rate was lowest for Greenlee county (11.6) and highest for Apache county (29.4).

The 1988 Arizona total fertility rate, the highest of the past six years, exceeded the level (2,110.0) considered necessary for a given generation to exactly replace itself in the population by 7 percent (Table 1-2). All age groups of women, except those over 44 years of age, had higher birth rates in 1988 than in 1983 (Table 1-2). The 1988 birth rates were the highest of the six-year period for 15 to 19 year old adolescents and for women 25-29 years old, 30-34 years old, 35-39 years old and 40-44 years old.

In 1987, the latest year with comparative U.S. data,[1] Arizona age-specific birth rates for every five-year age group of females beginning at 15 years exceeded the respective national rates (Table 1-2). Birth rates for adolescents (15-19 years) and for 20-24 year old women exceeded the respective U.S. rates by 35 and 31 percent respectively. Only girls less than 15 years old had a higher birth rate in the U.S. than in Arizona.

The 1988 ratio of low birthweight babies (LBW or 2,500 or less grams) decreased 3 percent from the 1987 ratio but remained higher than the ratio when this decade started (Table 1-3). The ratio of LBW babies not only failed to improve from 1980 to 1988 but also the weight distribution of LBW babies worsened. Very low birthweight (VLBW or 1,500 or less grams) babies have much lower chances of survival and healthy development than do LBW babies weighing 1,501 to 2,500 grams.[2] The proportion of VLBW among singleton LBW births rose from 13.4 percent in 1980 to 15.7 percent in 1988.

All counties did not contribute to the state's lack of improvement in the LBW ratio from 1980 to 1988. Prime contributors were the worsening LBW trends of eight counties: Maricopa, Apache, Gila, Graham, Mohave, Santa Cruz, Yavapai and Yuma. The combined LBW ratio for these eight counties of 60.7 in 1980 rose to 63.5 in 1988. In 1988 compared to 1980, these counties proportionately accounted for both more births (71 and 67 percent respectively) and more LBW births (72 and 66 percent respectively).

The annual proportion of babies born preterm or before 37 weeks of gestation increased for the third consecutive year. The 1988 proportion was 12.8 percent compared to 12.6 and 12.5 percent in 1987 and 1986 respectively. The proportion of preterm births for the U.S. was 10.2 in 1987, the latest year with national data available.[1] The 1988 risk of LBW was 8.4 times higher among preterm births (26.9 percent) than among births which reached at least 37 weeks of gestation. More than one-half (55.1 percent) of LBW babies were born prematurely in 1988.

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[1] National Center for Health Statistics. Advance report of final natality statistics, 1987. Hyattsville, MD: Public Health Service, 1989

[2] McCormick, M.C. The contribution of low birth weight to infant mortality and childhood morbidity. New England Journal of Medicine, 1985, 312, 82-90.

The proportion of births to women who received less than five prenatal visits during pregnancy also increased for the third consecutive year to 9.9 percent in 1988. (The 1986 and 1987 percents were 8.4 and 9.0 respectively.) However, the risk of a LBW baby for women giving birth after less than five prenatal visits declined again from 12.9 percent in 1987 to 12.3 percent in 1988, with the 1988 risk 7.3 percent less than the 1986 risk (13.2 percent). In 1988, mothers with fewer than 5 prenatal visits accounted for less than 20 percent of either premature births, LBW premature births or LBW births, while mothers with at least 9 visits accounted for a majority of each type of birth.

Less than 8 percent of women residents of Maricopa, Cochise and Yavapai counties who gave birth in 1988 had received fewer than 5 prenatal visits. The other 12 counties had higher proportions of women giving birth after this amount of care, with 11 counties exceeding the statewide proportion of 9.9 percent. Proportions of mothers with less than 5 prenatal visits ranged from 11.1 to 14.9 percent for Pima, Apache, Coconino, Gila, Mohave and Pinal county residents. The proportions worsened to 16.5, 17.1 and 17.2 percent for Santa Cruz, Yuma and Navajo county mothers respectively, and deteriorated to over 21 percent for mothers in Greenlee and La Paz counties respectively.

The percent of women giving birth who began prenatal care in the first trimester of pregnancy fell to its lowest level of the decade in 1988 (66.2 percent). In contrast, the national proportion of mothers beginning early prenatal care has been at least 76 percent annually from 1979 to 1987. Ethnic differences in the receipt of early prenatal care ranged from a high of 75 percent for white non-Hispanic mothers to a low of 49 percent for Native American mothers. Among maternal age groups, early prenatal care was highest for 30-34 year olds (76 percent) and lowest for those below 20 years (45 percent).

The 18-year trend of annual increases in the proportion of births to unwed women continued in 1988 with a new record-high percent of 28.6. The continual growth since 1970 in the proportion of births to unwed women has occurred for white non-Hispanic, Hispanic, Black and Native American women. The Arizona proportion of births to unwed women was 11 percent greater than the U.S. proportion in 1987, the latest year with national data available.[1] The 18,716 unmarried women giving birth in 1988 accounted for 37.7 percent of the LBW babies.

Less than one-third of unmarried women giving birth in 1988 were younger than 20 years old. Teenagers, i.e. females below 20 years of age, accounted for 13.8 percent of births in 1988, the same proportion as in 1987 and 1986. White non-Hispanic teenagers were the only ethnic group of adolescents with fewer births in 1988 than in 1987. Since 1983, the majority of teenagers giving birth have been Hispanic, Black or Native American.[3]

The proportion of births to non-white women (including Black, Native American, non-white Hispanic and other such as Asian/Pacific Islander) rose slightly from 14.7 percent in 1987 to 14.9 percent in 1988. The 1988 LBW risk of non-white mothers was 8.1 percent compared to 6.0 percent for white mothers, a 35 percent difference. Non-white mothers accounted for proportionally more LBW births in 1988 than in 1987 (19.2 and 18.2 percent respectively). Non-white compared to white mothers were more likely to be teenagers (18 and 13 percent), unmarried (52 and 24 percent) and to begin prenatal care after the first trimester of pregnancy (46 and 32 percent respectively).

[3] Mrela, C.K. Teenage pregnancy report, Arizona, 1983-1988. Phoenix, AZ: Arizona Department of Health Services, June 1989.

TABLE 1-1

BIRTH RATES[1] BY ARIZONA COUNTY OF RESIDENCE, ARIZONA AND UNITED STATES,[2] 1983-1988

AREA	1983	1984	1985	1986	1987	1988	Percent Change From 1987
U.S.	15.5	15.5	15.8	15.6	15.7	15.9	+ 1.3
ARIZONA	18.0	17.9	18.6	18.1	18.3	18.2	- 0.5
Apache	31.4	34.9	32.9	29.0	29.7	29.4	- 1.0
Cochise	17.2	17.7	16.2	15.6	16.0	16.0	0.0
Coconino	22.2	22.0	22.6	20.5	21.8	20.7	- 5.0
Gila	17.5	17.7	16.8	15.7	14.2	16.3	+14.8
Graham	18.0	18.6	17.4	16.1	18.0	16.8	- 6.7
Greenlee	15.4	17.1	18.5	11.1	12.9	11.6	-10.1
La Paz	17.3	14.5	16.3	15.2	14.0	15.0	+ 7.1
Maricopa	17.6	17.7	18.8	18.5	18.4	18.4	0.0
Mohave	15.5	15.2	13.3	13.8	14.8	15.0	+ 1.4
Navajo	26.5	26.3	26.2	25.6	26.2	25.2	- 3.8
Pima	16.5	16.0	16.5	16.2	15.6	16.4	+ 5.1
Pinal	19.3	18.8	20.5	19.8	19.8	19.0	- 4.0
Santa Cruz	20.6	22.8	19.3	18.3	18.7	22.1	+18.2
Yavapai	14.0	12.3	12.4	12.3	12.3	13.1	+ 6.5
Yuma	20.1	20.4	21.8	22.4	22.0	22.9	+ 4.1

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[1] Rates are presented per 1,000 population.

[2] U.S. data from the National Center for Health Statistics; rates for 1987 and 1988 are provisional and rates for 1982-1986 are final.

TABLE 1-2

GENERAL FERTILITY RATE,[1] TOTAL FERTILITY RATE,[2] AND AGE-SPECIFIC LIVE BIRTH RATES,[3] ARIZONA AND UNITED STATES,[4] 1983-1988

Year	Area	General Fertility Rate	Total Fertility Rate	AGE-SPECIFIC BIRTH RATES BY AGE OF MOTHER: Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and Over
1983	Arizona	77.1	2,073	1.1	65.9	132.8	117.2	67.6	25.6	5.2	0.3
	U.S.	65.8	1,803	1.1	51.7	108.3	108.7	64.6	22.1	3.8	0.2
1984	Arizona	77.2	2,098	1.0	63.6	137.4	116.7	70.1	25.5	5.0	0.3
	U.S.	65.4	1,806	1.2	50.9	107.3	108.3	66.5	22.8	3.9	0.2
1985	Arizona	79.6	2,190	0.9	67.0	144.8	118.8	73.8	27.0	5.5	0.2
	U.S.	66.2	1,843	1.2	51.3	108.9	110.5	68.5	23.9	4.0	0.2
1986	Arizona	78.2	2,159	1.3	66.7	142.9	117.8	74.1	23.7	5.2	0.2
	U.S.	65.4	1,836	1.3	50.6	108.2	109.2	69.3	24.3	4.1	0.2
1987	Arizona	79.0	2,201	1.2	69.1	142.5	122.6	74.7	29.3	5.2	0.3
	U.S.	66.1	1,871	1.3	51.1	108.9	110.8	71.3	26.2	4.4	0.2
1988	Arizona	79.3	2,259	1.3	69.9	142.8	126.2	75.2	30.5	5.7	0.2
	U.S.	67.3	NA	NA	NA	NA	NA	NA	NA	NA	NA

[1] The general fertility rate is the total number of live births per 1,000 women of childbearing age (15-44 years old).

[2] The total fertility rate is the sum of each age-specific live birth rate multiplied by the number of years in the age group (five years in this case). In Table 1-2 the rate of 2,259 in 1988, for example, means that if a hypothetical group of 1,000 women were to have the same birth rates in each age group that were observed in the actual childbearing population in 1988, they would have a total of 2,259 children by the time they reached the end of the reproductive period (taken here as age 50), assuming that all of the women survived to that age.

[3] The age-specific live birth rate is the number of live births per 1,000 women in a specific age-group. For females under 15, the rate is calculated using the female population 10-14 years of age. For women over 44 the rate is calculated using the female population 45-49 years of age.

[4] U.S. data furnished by the National Center for Health Statistics.

TABLE 1-3

LOW-BIRTHWEIGHT BIRTH RATIOS[1] IN THE UNITED STATES[2] AND IN METROPOLITAN AND NON-METROPOLITAN COUNTIES[3] OF ARIZONA, SELECTED YEARS, 1970 - 1988

County of Residence	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
UNITED STATES	79.4	73.9	72.6	70.7	71.1	69.4	68.4	68.1	67.5	68.2	67.2	67.5	68.1	NA	NA
ARIZONA	73.8	64.8	62.7	62.1	62.5	61.1	61.7	60.1	58.4	60.5	61.3	62.5	62.2	64.9	62.7
METROPOLITAN COUNTIES	73.1	62.5	61.9	60.9	60.5	60.8	61.3	60.0	57.4	59.5	61.6	62.3	62.0	65.3	62.1
Maricopa	73.4	64.7	61.1	60.8	59.4	60.2	60.8	59.9	57.9	58.9	62.8	62.0	63.2	65.9	62.5
Pima	72.3	59.6	64.2	61.3	63.7	62.8	62.6	60.1	55.8	61.8	58.1	63.2	58.2	63.6	60.7
NON-METROPOLITAN COUNTIES	72.9	70.1	64.5	64.9	67.0	61.8	62.9	60.6	61.2	63.3	60.3	63.3	62.8	63.4	64.6
Apache	74.5	64.9	63.1	65.5	78.2	58.2	60.2	64.8	63.4	62.1	60.0	73.9	73.4	64.8	60.8
Cochise	83.6	87.0	69.6	79.8	73.5	79.0	72.6	74.1	71.4	90.1	77.3	66.7	57.1	67.9	59.8
Coconino	88.8	69.1	57.3	66.2	61.7	71.6	61.4	64.6	54.3	66.4	62.3	67.8	61.8	57.3	60.5
Gila	53.4	69.1	91.6	76.2	65.4	67.7	53.9	44.7	66.7	45.4	61.0	56.1	80.0	56.2	75.9
Graham	102.4	68.4	67.6	47.8	52.0	56.4	54.7	84.5	47.0	46.0	29.2	71.4	73.4	33.7	62.2
Greenlee	73.3	57.2	96.7	53.2	58.4	45.6	51.5	50.2	43.0	54.1	51.3	43.5	37.7	56.5	36.0
La Paz[4]	NA	NA	NA	NA	NA	NA	NA	NA	NA	105.9	51.3	68.4	83.7	50.5	51.4
Mohave	55.9	73.4	71.1	71.2	79.2	62.2	66.6	53.0	81.3	56.2	66.8	53.7	68.5	68.8	71.8
Navajo	81.5	75.4	56.5	67.9	66.5	62.5	62.1	66.6	50.5	53.4	57.4	57.5	58.5	68.1	59.3
Pinal	70.1	67.8	62.3	62.0	71.2	64.7	67.4	63.2	72.5	61.0	55.7	66.9	67.2	68.2	64.9
Santa Cruz	64.0	49.9	35.9	42.4	52.3	54.2	66.1	40.5	65.2	52.5	31.3	87.9	69.4	65.8	87.2
Yavapai	57.1	52.3	72.4	55.1	60.1	53.8	60.8	50.1	61.9	70.7	72.1	63.4	54.9	67.5	73.9
Yuma	73.2	55.3	62.5	59.3	59.2	49.2	60.2	49.4	48.9	55.9	58.8	47.4	49.3	58.9	63.0

[1] Per 1,000 live births

[2] U.S. data furnished by the National Center for Health Statistics

[3] By county of residence

[4] Included in Yuma county until January 1, 1983

TOTAL MORTALITY

Due largely to the aging population, 841 more Arizona residents died in 1988 than in 1987, with the 1988 number of deaths totaling 27,511. Age-adjustment of death rates controls for differences in the age composition of populations between time periods or between regions, genders and other relevant demographic variables. This process makes age-adjusted mortality rates better indicators than crude death rates of temporal changes and differences among diverse populations or subgroups of the population. All mortality rates discussed in this section are age-adjusted. Therefore, the reader should understand that the term age-adjusted precedes the word rate even though it was eliminated to make reading easier.

The annual mortality rate for all causes was consistently higher in Arizona than in the U.S. from 1983 to 1988 (Table 2-1). Since 1984, the total mortality rate for Arizona annually varied by less than 2 percent and thus could be considered stable. Likewise, annual U.S. mortality rates varied just as little during these years.

On an average day in Arizona from 1983 to 1988, about 22 persons died from heart disease, 16 died from malignant neoplasms or cancer, 4 from unintentional injuries, 4 from cerebrovascular diseases, 4 from chronic obstructive pulmonary disease (COPD), 2 killed themselves and 1 died from diabetes. Each of the other leading causes in Table 2-1 were responsible for less than one death on an average day during the six years.

Death rates for diseases of the heart, cerebrovascular diseases and atherosclerosis, three leading causes of death with common risk factors, declined from 1987 to their lowest level of the past six years in 1988 (Table 2-1). The death rate for no other leading cause was lowest in 1988. In 1988, Arizona residents were 5.3 percent less likely to die from diseases of the heart and 10.7 percent less likely to die from cerebrovascular diseases than their national counterparts. However, atherosclerosis was a 37.8 percent greater mortality risk for Arizona residents than their U.S. peers.

Despite the 1987 to 1988 decline in the rate of death from malignant neoplasms, cancer posed a greater threat to the lives of Arizonans in the later than the earlier part of this decade. The 1988 death rate was 3.3 percent higher than the 1983 rate. In contrast, the U.S. cancer death rate was virtually stable throughout the decade, varying from a low of 131.6 in 1981 to a high of 133.3 in 1988. Arizonans were 5.3 percent less likely to die from cancer than their national counterparts in 1988.

Leading causes of death involving the respiratory system, i.e. chronic obstructive pulmonary disease (COPD) and pneumonia/influenza, claimed the lives of Arizonans at higher rates in 1988 than in 1983. After a 13.5 percent increase from 1987, the 1988 death rate from pneumonia/influenza became the highest of the six-year period and of the decade.[a] The outbreak of influenza in the first few months of 1988 probably contributed to the increase and high death rate for pneumonia/influenza in both Arizona and the nation.[1] Since 1984, the COPD death rate has not fallen below 26, while in three of the preceding four years it was below 26. Throughout this decade, Arizonans annually were at greater mortality risk than their U.S. peers from both of these causes.

[a] The 1980 death rate for pneumonia/influenza was 16.9/100,000.

[1] National Center for Health Statistics. Annual summary of births, marriages, divorces and deaths, United States, 1988. Hyattsville, MD: Public Health Survey, July 1989.

As in prior years of the decade, injuries, both unintentional and intentional (homicide and suicide), were a greater mortality threat to Arizonans than their national peers in 1988. Arizonans in 1988 were 23 percent more likely to die from an unintentional injury and 58 percent more likely to kill themselves compared to all U.S. residents.

Unintentional injuries incurred in such events as a fire, fall, poisoning or drowning claimed Arizonan lives at equal rates in 1988 and 1983, thereby canceling the improvement seen in the intervening years. In contrast, although the 1988 motor vehicle unintentional injury fatality rate was higher than the 1983 rate, it was an improvement over the annual rates from 1984 to 1987. The 1988 suicide death rate also improved from the 1987 record-high rate but it was the second highest rate of the decade.

The 1988 Arizona mortality rate for diabetes, the eighth leading cause of death, was the highest of the past six years and of the decade.[b] Moreover, the 1988 diabetes death rate for Arizona exceeded all annual diabetes death rates for the U.S. during this decade. Diabetes is believed to be a major cause of blindness, renal failure, lower extremity amputations and congenital malformations and also increases the risk of cardiovascular and peripheral vascular conditions.[2] Only about half of the people with diabetes know they are diabetic and so can seek appropriate treatment according to a recent study.[3]

Infectious and parasitic diseases moved ahead of alcoholism and atherosclerosis to become the ninth leading cause of death among Arizonans in 1988. The higher ranking stemmed from the inclusion of human immunodeficiency virus (HIV) infection, a practice begun in 1987,[c] and deaths from HIV infection increased from 111 in 1987 to 161 in 1988. HIV infection alone was made a rankable cause of death for the U.S. in 1988 and it ranked 15th.[1] HIV infection was not among Arizona's 15 leading causes of death in 1988.

The 1988 mortality rate for alcoholism rose 16 percent from the decade-low rates of 1986 and 1987. Despite this increase, the 1988 alcoholism death rate was still 14 percent lower than the decade-high rate of 10.8 in 1984. During the past six years, 1,890 Arizonans died from conditions and diseases related to the abuse of alcohol.

Gender

From 1983 to 1988, male and female total mortality rates in Arizona did not change, while total mortality rates for both genders in the U.S. improved by at least 2 percent (Table 2-2). Arizona females had a higher annual mortality risk but Arizona males had a lower annual mortality risk than their respective national peers during the past six years.

Among the leading causes of death involving the circulatory system, males compared to females had greater reductions in mortality rates for diseases of the heart and cerebrovascular diseases. The atherosclerosis death rate dropped equally for both

[b] The death rates for diabetes were 9.1 and 10.7/100,000 in 1980 and 1988 respectively.

[2] Kovar, M.G., Harris, M.I. and Hadden, W.C. The scope of diabetes in the United States population. American Journal of Public Health, 1987, 12, 1549-1550.

[3] National Center for Health Statistics (Hadden, W.C. and Harris, M.I.) The prevalence of diagnosed diabetes undiagnosed diabetes and impaired glucose tolerance in adults 20-74 years of age, United States, 1976-80. Washington, D.C.: Government Printing Office, February 1987.

[c] National Center for Health Statistics. Annual summary of births, marriages, divorces, and deaths, United States, 1989. Hyattsville, MD: Public Health Service, July 1988.

genders. The gender differential, i.e. the ratio of male to female mortality rates, was miniscule for the 1988 risk of cerebrovascular or atherosclerotic death but still substantial for diseases of the heart, with males having a 68 percent greater risk.

Mortality rates for cancer have not improved during this decade for either gender in Arizona. The 1988 female cancer death rate was nearly identical to the 1980 rate of 104.8. Arizona males had a 6 percent greater chance of dying from cancer in 1988 than in 1980, with their 1988 rate the second highest of the decade. The 1988 mortality risk of cancer was 47 percent higher for Arizona males than females.

The respiratory system diseases of COPD and pneumonia/influenza posed a 74 percent and a 25 percent greater mortality risk respectively for males than females in 1988. COPD claimed female lives at the highest but male lives at the lowest rate of the decade in 1988. Compared to respective 1980 rates, females had a 35 percent greater chance and males a 19 percent lower chance of death from COPD in 1988. The 1988 female mortality rate for pneumonia/influenza also was the highest of the decade, 14 percent above the 1980 rate and 64 percent above the 1983 rate. The 1988 male death rate for pneumonia/influenza, in contrast, did not exceed the rates in 1980 and 1984.

Since 1985, male unintentional injury mortality rates have been relatively stable, annually varying by less than 2 percent. Female unintentional injury fatality rates varied by no more than 7 percent since 1983. The 1988 death rate for this cause was neither the best nor the worst of the past six years for either gender. Males were 2.6 times more likely than females to be an unintentional injury fatality in 1988.

Male rates for fatal unintentional injuries inflicted by motor vehicles gradually dropped from 1985 to 1988, but the 1988 rate was still above the decade-lowest rate in 1983. Female mortality rates for this cause showed a similar temporal trend. Death rates for unintentional injuries from events not involving motor vehicles did not improve for males from 1983 to 1988, but did improve by 21 percent for females.

Self-inflicted injury or suicide death rates also improved for females, with the 1988 rate the lowest of the decade. The 2 percent drop in the male suicide death rate from 1987 to 1988 made little change in its level, with the 1988 rate the second-highest of the decade. Males were 4.5 times more likely than females to fatally injure themselves in 1988, the largest gender differential in suicide risk in the decade. This differential in risk was 70 percent greater than the largest differential in preceding years.

Other-inflicted injury or homicide death rates in 1988 had not improved from the 1983 rates for both genders. Compared to 1983, the 1988 risk of being murdered was the same for males and 51 percent higher for females. The 1988 female homicide death rate, the highest of the past six years, was almost equivalent to the decade-highest rate of 5.5 in 1980. The likelihood to be fatally injured by another person was 2.6 times higher for males than females in 1988.

Both diabetes and infectious and parasitic diseases caused males to die at the highest rate of the decade in 1988. The 1988 male diabetes death rate exceeded the 1980 rate by 44 percent, while the 1988 male death rate from infectious and parasitic diseases was 3.1 times greater (210 percent) than the 1980 rate. The large increase in the death rate for the latter cause was largely due to the inclusion of HIV infection, which predominately afflicts males at this time. However, the infectious and parasitic disease death rate also was highest for females in 1988, indicative of the growing number of female Acquired Immunodeficiency Syndrome (AIDS) cases. The 1988 diabetes death rate for females was similar to rates seen in several prior years.

Death due to alcoholism substantially increased for males but not for females from 1987 to 1988. The increase for males returned their rate to the 1983 level, thereby canceling the annual improvements seen from 1985 to 1987. However, the male 1988 alcoholism death rate was 19 percent better than the 1980 rate. The female death rate from alcoholism was 33 percent lower in 1988 than in 1980. Males in 1988 were three times more likely than females to die from alcoholism.

Gender by Urban and Rural Regions

Total mortality rates were 13 percent higher for rural than urban residents (Table 2-3). The mortality disadvantage of rural females compared to urban females was twice as great (31 percent) as the disadvantage of rural males relative to urban males (16 percent). The rank-order of the four gender groups by region from lowest to highest mortality risk was urban females, rural females, urban males and rural males.

Among the 12 leading causes of death in Table 2-3, rural males had mortality rates at least two percent lower than urban male rates for only three causes: cancer, infectious and parasitic diseases, and atherosclerosis. The lower death rate for infectious and parasitic diseases largely reflected the fact that HIV infection is predominately an urban phenomenon at this time. Suicide was the only cause-specific mortality rate on which urban and rural males were equal, i.e. differed by less than 2 percent.

The degree to which the death rates of rural males exceeded those of urban males on the other eight leading causes varied from 3 to 170 percent. From highest to lowest exceedance, the rank-order was alcoholism; unintentional injuries; diabetes; homicide; influenza/pneumonia; diseases of the heart; cerebrovascular diseases; and COPD.

The rural female death rate equaled the urban female death rate not only for suicide but also for diseases of the heart. Relative to the cause-specific comparisons between urban and rural males, rural female death rates were at least 2 percent lower than urban female rates for more causes, namely cancer, cerebrovascular diseases, COPD, infectious and parasitic diseases, and homicide. The magnitude of exceedances on the remaining causes also were smaller, ranging from 4 to 59 percent. The rank-order of the rural female mortality excess from highest to lowest was unintentional injuries; alcoholism; diabetes; influenza/pneumonia; and atherosclerosis.

The differential or ratio among cause-specific death rates for the four groups usually was larger when the comparison was not limited to one gender as above. Large differences in mortality risk not only indicate which populations are at elevated risk but also may indicate which populations should be studied for differences in factors possibly influencing risk. Listed below is the largest differential or ratio for each cause and which of the four groups, i.e. urban females (UF); rural females (RF); urban males (UM); and rural males (RM), gave the highest and lowest rates.

Diseases of the heart:	1.86 (RM/UF)
Malignant neoplasms:	1.54 (UM/RF)
Unintentional injuries:	4.65 (RM/UF)
Motor vehicle:	4.61 (RM/UF)
Other than motor vehicle:	4.75 (RM/UF)
Cerebrovascular diseases:	1.18 (UF/RF)
Chronic obstructive pulmonary disease:	2.19 (RM/RF)
Influenza and pneumonia:	0.71 (RM/UF)
Suicide:	4.54 (UM/UF)

Diabetes:	1.99 (RM/UF)
Infectious and parasitic diseases:	3.37 (UM/RF)
Alcoholism:	7.00 (RM/UF)
Atherosclerosis:	1.10 (RF/RM)
Homicide:	2.96 (RM/RF)

County of Residence

A profile of the relative standing of counties' death rates was developed for each specific cause of mortality. A county was included in a profile only when its cause-specific mortality rate was based on at least ten resident deaths. This criterion ensured a minimally reliable rate. The profiles used the following definitions. A county was considered to have the highest or lowest mortality risk from a cause if it had the highest or lowest rate among the counties respectively based on the data presented in Table 2-4. Higher mortality risk was when a mortality rate was not the highest among the counties but was at least 12 percent above the state rate. Conversely, lower mortality risk was when a rate was not the lowest among the counties but was at least 12 percent below the state rate. When a county's rate met none of the prior definitions but was based on the specified number of deaths, the mortality risk was called average or at the level of all residents of the state. (All comparisons are made with the state not the U.S. rate. All counties with at least 10 deaths had rates in excess of the U.S. rate for deaths from unintentional injuries, pneumonia and influenza, and homicide.)

The reader is reminded that the term lowest or lower mortality risk does not mean that persons with the disease do not die from it. A county relative to other counties may have low rates of death from diseases which occur mainly at older ages (e.g., heart disease, cancer and stroke) because it has high death rates from causes which occur primarily at younger ages (e.g., unintentional injuries). In other words, the number of survivors in the population who may acquire the diseases of older age is seriously reduced by the high rate of deaths at younger ages.

The cause-specific mortality patterns by county of residence given below were introduced in the annual report of 1987 data. If the 1988 cause-specific risk level of a county equals the 1987 level, then the name of the county is followed by an asterisk (*). Only five of 15 counties had mortality rates for homicide and atherosclerosis based on at least 10 deaths, so profiles for these two leading causes are not given.

Diseases of the heart

Highest mortality risk:	Greenlee county
Higher mortality risk:	La Paz, Mohave*, Navajo and Pinal counties
Lowest mortality risk:	Apache county*
Lower mortality risk:	No county
Average mortality risk:	Cochise*, Coconino, Gila, Graham*, Maricopa*, Pima*, Santa Cruz, Yavapai* and Yuma counties

Cancer

Highest mortality risk:	Mohave county
Higher mortality risk:	Greenlee county
Lowest mortality risk:	Coconino county*
Lower mortality risk:	Apache*, Navajo* and Santa Cruz counties

Average mortality risk: Cochise, Gila, Graham*, La Paz*, Maricopa*, Pima*, Pinal*, Yavapai and Yuma* counties

Unintentional Injuries: Motor Vehicle Related

Highest mortality risk: Apache county*
Higher mortality risk: Coconino*, Gila*, Mohave*, Navajo*, Pinal*, Yavapai* and Yuma* counties
Lowest mortality risk: Pima county
Lower mortality risk: Maricopa county
Average mortality risk: Cochise county

Unintentional Injuries: Not Related to Motor Vehicles

Highest mortality risk: Apache county*
Higher mortality risk: Coconino*, Mohave*, Navajo*, Pinal and Yuma* counties
Lowest mortality risk: Maricopa county
Lower mortality risk: Cochise and Yavapai counties
Average mortality risk: Gila and Pima* counties

Cerebrovascular Diseases or Stroke

Highest mortality risk: Santa Cruz county
Higher mortality risk: Pinal and Yuma counties
Lowest mortality risk: Graham county
Lower mortality risk: Cochise and Coconino counties
Average mortality risk: Gila, Maricopa*, Mohave*, Navajo*, Pima*, and Yavapai* counties

Chronic Obstructive Pulmonary Disease

Highest mortality risk: Graham county
Higher mortality risk: Pima, Santa Cruz, Yavapai* and Yuma* counties
Lowest mortality risk: Navajo county
Lower mortality risk: Cochise* and Coconino counties
Average mortality risk: Gila, Maricopa, Mohave and Pinal counties

Suicide

Highest mortality risk: Mohave county
Higher mortality risk: Apache, Pima, Pinal and Yavapai* counties
Lowest mortality risk: Coconino county
Lower mortality risk: Cochise and Navajo counties
Average mortality risk: Maricopa* and Yuma counties

Pneumonia and Influenza

Highest mortality risk: Apache county
Higher mortality risk: Gila, Navajo and Yavapai* counties
Lowest mortality risk: Coconino county
Lower mortality risk: Cochise county
Average mortality risk: Maricopa*, Mohave*, Pima, Pinal and Yuma* counties

Alcoholism

Highest mortality risk:	Apache county
Higher mortality risk:	Coconino, Mohave*, Navajo, Pima*, Pinal and Yuma counties
Lowest mortality risk:	Maricopa county*
Lower mortality risk:	No county
Average mortality risk:	Cochise and Yavapai* counties

Diabetes

Highest mortality risk:	Apache* and Navajo counties equal
Higher mortality risk:	Cochise*, Coconino, Gila*, Pima and Pinal* counties
Lowest mortality risk:	Maricopa county
Lower mortality risk:	Yavapai county
Average mortality risk:	Mohave county

Infectious and Parasitic Diseases

Highest mortality risk:	Gila county
Higher mortality risk:	Apache county
Lowest mortality risk:	Yavapai county
Lower mortality risk:	Cochise, Pinal and Yuma counties
Average mortality risk:	Maricopa and Pima counties

TABLE 2-1

TRENDS IN AGE-ADJUSTED MORTALITY RATES[1] FOR LEADING CAUSES OF DEATH[2] IN ARIZONA AND THE UNITED STATES, 1983 - 1988

CAUSE	1983		1984		1985		1986		1987		1988		Percent Change From 1987	
	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.
Diseases of heart	171.2	188.5	166.9	183.3	162.5	181.7	157.9	175.4	161.9	169.9	157.9	166.7	-2.5	-1.9
Malignant neoplasms	122.3	132.3	123.9	133.1	125.2	132.5	126.1	132.5	128.6	133.1	126.3	133.3	-1.8	+0.2
Unintentional injuries	40.8	34.9	44.8	35.6	42.9	34.3	44.3	35.5	43.0	34.6	43.2	35.1	+0.5	+1.5
Motor vehicle-related	22.7	18.1	27.5	19.2	27.0	18.3	27.9	19.8	26.4	19.7	25.1	20.1	-4.9	+2.0
Other than motor vehicle	18.1	16.8	17.3	16.4	15.9	16.0	16.4	15.7	16.6	14.9	18.1	15.0	+9.0	+0.7
Cerebrovascular disease	31.0	34.3	31.9	33.9	29.1	32.3	27.5	30.4	27.4	30.1	26.6	29.8	-2.9	-1.0
Chronic obstructive pulmonary disease	24.7	17.6	26.4	18.0	26.3	18.6	27.6	18.5	26.5	18.7	26.1	19.2	-1.5	+2.7
Pneumonia and influenza	12.7	11.2	16.2	12.2	15.0	13.2	16.6	13.6	15.6	13.2	17.7	14.2	+13.5	+7.6
Suicide	16.6	11.7	16.5	11.6	17.1	11.2	17.8	12.0	19.3	11.7	17.8	11.3	-7.8	-3.4
Diabetes	10.5	9.8	9.6	9.9	10.0	10.1	9.5	9.4	10.0	9.6	10.7	9.9	+7.0	+3.1
Infectious and parasitic diseases[3]	6.5	6.6	6.9	7.9	7.8	8.2	7.3	9.1	10.3	13.5	11.6	NA	+12.6	NA
Alcoholism	9.0	*	10.8	*	10.0	*	8.1	*	8.0	*	9.3	NA	+16.3	NA
Atherosclerosis	5.7	4.5	5.8	4.1	5.8	4.0	5.3	3.6	5.4	3.7	5.1	3.7	-5.6	0.0
ALL CAUSES	547.3	550.5	552.0	545.9	544.2	546.1	543.6	541.7	548.4	536.2	544.2	536.3	+0.1	0.0

NOTE: 1988 U.S. data are provisional.

[1] Rates per 100,000 population.

[2] Leading causes are those 12 causes with the greatest total number of deaths for males for the 1983 to 1988 time period.

[3] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 2-2

TOTAL AGE-ADJUSTED MORTALITY RATES[1] FOR LEADING CAUSES OF DEATH[2] BY GENDER IN ARIZONA, 1983-1988

CAUSE	1983		1984		1985		1986		1987		1988		Percent Change From 1987	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Diseases of heart	126.5	223.9	122.9	218.9	121.5	210.5	117.5	206.0	120.0	211.2	120.4	201.7	+0.3	-4.5
Malignant neoplasms	105.6	146.2	105.6	147.6	107.3	148.4	108.0	150.0	108.9	154.3	104.5	153.9	-4.0	-0.3
Unintentional injuries	23.9	60.1	23.6	66.4	23.9	62.3	25.4	63.5	23.6	62.7	23.8	62.5	+0.8	-0.3
Motor vehicle-related	12.3	33.2	14.3	40.0	14.3	40.0	16.5	39.4	14.9	38.0	14.6	35.6	-2.0	-6.3
Other than motor vehicle	11.7	26.9	9.3	25.5	9.6	22.3	8.8	24.0	8.7	24.7	9.2	26.8	+5.7	+8.5
Cerebrovascular disease	31.1	30.9	31.1	32.8	27.9	30.7	27.6	27.5	26.8	27.9	26.8	26.1	0.0	-6.5
Chronic obstructive pulmonary disease	15.9	35.7	17.3	37.6	19.9	35.9	19.1	38.4	19.4	35.5	20.0	34.7	+3.1	-2.3
Pneumonia and influenza	9.7	16.4	13.1	20.1	12.5	18.0	14.2	19.6	13.1	18.7	15.9	19.9	21.4	+6.4
Suicide	8.5	25.2	7.2	26.2	7.2	27.5	8.8	27.2	8.9	30.0	6.6	29.4	-25.8	-2.0
Diabetes	9.9	11.3	8.8	10.5	9.6	10.7	8.4	10.8	9.8	9.9	9.5	12.1	-3.1	+22.2
Infectious and parasitic diseases[3]	5.4	6.4	5.6	6.7	5.8	8.6	5.5	7.9	5.8	8.7	6.2	16.9	+6.9	+94.3
Alcoholism	5.6	14.3	6.6	15.3	6.7	14.5	4.0	12.6	5.0	11.3	4.7	14.2	-6.0	+25.7
Atherosclerosis	5.7	5.6	6.2	5.2	6.0	5.5	5.2	5.0	5.8	4.8	5.2	5.1	-10.3	+6.3
Homicide	3.5	13.5	4.2	13.5	4.6	11.8	4.7	15.0	3.9	12.5	5.3	13.6	+35.9	+8.8
All Causes AZ	420.3	685.5	425.6	698.6	418.0	686.9	420.1	686.2	424.3	690.8	420.9	684.2	-0.8	-1.0
All Causes U.S.	411.5	725.3	409.7	716.7	409.4	716.8	406.6	709.1	404.5	698.6	403.5	699.8	-0.3	+0.2

NOTE: 1988 U.S. data are provisional.

[1] Rates are presented per 100,000 population.

[2] Leading causes are those 12 causes with the greatest total number of deaths for males for the 1983 to 1988 time period.

[3] Beginning in January 1987 includes data for the newly introduced categroy numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 2-3

AGE-ADJUSTED MORTALITY RATES[1] FOR LEADING CAUSES OF DEATH[2] BY GENDER IN URBAN AND RURAL AREAS,[3] ARIZONA, 1988

	BOTH GENDERS			MALE			FEMALE		
Cause of Death	Statewide	Urban	Rural	Statewide	Urban	Rural	Statewide	Urban	Rural
ALL CAUSES	544.2	528.8	598.8	684.2	660.7	765.8	420.9	416.7	544.5
Diseases of heart	157.9	154.6	168.5	201.7	195.9	223.5	120.4	120.1	121.5
Malignant neoplasms	126.3	127.1	124.1	153.9	155.5	152.2	104.5	105.6	101.0
Unintentional injuries	43.2	34.6	65.1	62.5	49.1	91.1	23.8	19.6	31.1
Motor vehicle-related	25.1	19.0	38.2	35.6	26.9	51.2	14.6	11.1	21.3
Other than motor vehicle	18.1	15.6	26.9	26.8	22.2	39.9	9.2	8.4	11.8
Cerebrovascular disease	26.6	26.5	26.7	26.1	25.0	26.7	26.8	27.8	23.5
Chronic obstructive pulmonary disease	26.1	26.4	25.2	34.7	34.3	35.4	20.0	21.3	16.2
Influenza and pneumonia	17.7	17.2	19.3	19.9	19.2	21.6	15.9	15.4	17.0
Suicide	17.8	17.6	18.6	29.4	29.5	29.3	6.6	6.5	6.6
Diabetes	10.7	9.6	14.5	12.1	10.8	16.9	9.5	8.5	12.9
Infectious and parasitic diseases	11.6	12.1	9.9	16.9	17.5	14.4	6.2	6.6	5.2
Alcoholism	9.3	7.4	16.2	14.2	10.9	29.4	4.7	4.2	6.6
Atherosclerosis	5.1	5.1	5.1	5.1	5.2	4.8	5.2	5.1	5.3
Homicide	9.5	9.3	10.7	13.6	13.0	15.4	5.3	5.5	5.2

[1] Rates are presented per 100,000 population.

[2] Leading causes are those with the greatest number of deaths for the 1983 to 1988 period.

[3] Maricopa and Pima counties comprise Arizona's urban areas while the remaining counties represent rural areas.

[4] Includes data for the category numbers 042-044 (HIV infection) introduced in January 1987 by the National Center for Health Statistics

TABLE 2-4

AGE-ADJUSTED MORTALITY RATES[1] FOR LEADING CAUSES OF DEATH[2] BY COUNTY, ARIZONA, UNITED STATES: 1988

Cause of Death	U.S.[3]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	536.3	544.2	597.1	524.7	508.9	587.4	565.6	599.8	631.9	525.9	638.2	643.7	537.3	664.2	541.1	591.9	547.5
Diseases of heart	166.7	157.9	88.5	171.6	150.5	173.2	150.5	216.4	203.3	154.9	189.0	177.4	153.9	186.6	175.9	167.0	154.5
Malignant neoplasms	133.3	126.3	96.8	119.6	79.9	128.1	116.3	149.8	113.8	127.6	160.4	94.9	125.7	128.8	105.5	139.7	126.6
Unintentional injuries	35.1	43.2	140.7	41.7	63.8	52.2	44.8	34.1*	80.5	35.9	68.7	95.5	36.5	88.7	25.5*	45.7	52.0
Motor vehicle-related	20.1	25.1	87.7	26.0	41.1	35.7	25.1*	22.4*	34.5*	20.9	43.6	50.8	19.0	53.5	18.2*	29.9	28.3
Other than motor vehicle	15.0	18.1	53.0	15.7	22.7	16.5	19.7*	11.7*	46.0*	15.0	25.1	44.7	17.5	35.2	7.3*	15.8	23.7
Cerebrovascular disease	29.8	26.6	13.6*	21.1	20.2	23.7	18.9	43.1*	14.5*	26.8	27.6	27.2	25.8	30.3	50.0	26.2	30.3
Chronic obstructive pulmonary disease	19.2	26.1	7.1*	17.1	16.4	27.9	38.4	34.5*	25.8*	25.3	24.9	14.1	29.5	28.9	32.8	31.5	32.1
Suicide	11.3	17.8	23.4	10.8	10.3	8.0*	18.4*	35.4	8.0*	16.8	25.0	14.8	19.9	21.7	11.0*	22.0	15.8
Pneumonia and influenza	14.2	17.7	27.5	15.5	14.9	20.9	40.7*	8.6*	11.9*	17.7	17.7	22.4	16.0	18.5	7.4*	26.7	16.1
Infectious and Parasitic diseases[4]	NA	11.6	14.3	9.6	6.1*	20.4	7.4*	-	5.9*	12.2	6.5*	13.0*	11.8	8.3	4.4*	3.9	7.8
Diabetes	9.9	10.7	23.9	12.8	21.4	19.3	24.9*	14.2*	13.9*	8.8	9.6	23.9	11.9	20.2	18.2*	8.9	8.1*
Homicide	9.0	9.5	14.7	7.2*	6.9*	6.2*	4.4*	-	2.7*	9.3	16.1	9.4*	9.2	17.6	-	7.9*	7.8*
Alcoholism	NA	9.3	39.3	9.5	13.0	16.6*	6.5*	-	2.7*	6.3	11.3	39.0	10.5	15.9	12.1*	10.3	12.8
Atherosclerosis	3.7	5.1	1.8*	1.1*	8.1*	-	7.0*	-	10.6*	3.4	11.1	1.3*	10.0	5.3	-	5.2*	6.4

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[1] Rates are presented per 100,000 population.

[2] Leading causes are those causes with the greatest total number of deaths for the 1983 to 1988 period.

[3] Provisional data furnished by the National Center for Health Statistics.

[4] Includes data for the category numbers 042-044 (HIV infection) introduced in January 1987 by the National Center for Health Statistics.

* Less than ten deaths for a specific cause.

AGE-SPECIFIC MORTALITY

Infant Mortality

Infants died before their first birthday in 1988 at a rate higher than the annual infant mortality rates in the preceding six years (Table 3-1). In 1982, Arizona infants had a 24 percent better chance of surviving beyond their first year of life than did infants in the nation. By 1988, the difference in mortality risk between Arizona and U.S. infants was a mere 2 percent, a twelvefold reduction in the risk differential.

The majority of counties contributed to worse infant mortality for the state. The 1988 infant mortality rates (IMRs) of Maricopa, Coconino, Gila, Greenlee, Mohave, Navajo, Santa Cruz and Yavapai counties exceeded both the state and national IMR (Table 3-1). In 1987, only two counties exceeded both the state and national IMR. Only Apache and Pinal counties had a 1988 IMR lower than the IMR in each of the prior six years. Apache was the sole county with a consistently declining trend in IMRs from 1984 to 1988.

Arizona's 1987 to 1988 increase in infant mortality was due to an increased rate of infant death in the postneonatal period (from 28 days to one year of age), while the rate of neonatal (before 28 days of age) death remained stable (Table 3-2). Postneonatal deaths have comprised a larger share of infant mortality in Arizona than in the U.S. since 1981. The difference between Arizona and the U.S. in neonatal mortality rates (NMR) was reduced, going from 19 percent better in Arizona in 1983 to 8 percent better in 1988.

Proportionally more neonates who died in 1988 than in 1987 resided in the metropolitan counties of Pima and Maricopa (80.5 and 77.1 percent respectively). The 1988 NMR for Maricopa county equaled its 1987 rate, while the NMR for Pima county rose from 4.9 in 1987 to 5.8 in 1988 (Table 3-3). The singular temporal trend in IMR seen for Apache county stemmed from improvements in both neonatal and postneonatal mortality. From 1987 to 1988, the NMR for this county declined from 2.7 to 2.6 and the postneonatal mortality rate (PNMR) dropped from 5.9 to 2.7, a reduction of 54 percent.

Because most rural counties have a small annual number of neonatal and postneonatal deaths (Table 3-3), a six-year rate (1983-1988) was used for more reliable comparisons (Table 3-4). The six-year IMR for all non-metropolitan or rural counties was 4 percent higher than the IMR for the metropolitan counties. However, rural compared to metropolitan infants had poorer survival chances only because of a 38 percent higher rate of postneonatal mortality. Rural infants had a 15 percent better chance of surviving their first 27 days of life than did metropolitan infants.

Gila, Graham, Greenlee, La Paz and Santa Cruz counties had too few infant deaths during the six-year period for reasonably reliable IMRs, NMRs and PNMRs. Thus, they were excluded from the comparisons among individual counties which follow. Cochise was the only rural county with a PNMR lower than the PNMR for at least one metropolitan county, specifically Maricopa. The PNMRs in all other rural counties, ranging from a high of 6.4 for Apache county to a low of 4.0 for Yuma county, were greater than the PNMR of either metropolitan county.

The rate of neonatal mortality in Apache, Coconino, Mohave and Yuma counties was at least 20 percent lower than the rate for either metropolitan county. Yuma county had the lowest NMR, 32 percent lower than the metropolitan NMR. Mohave county had the next lowest NMR, followed by Apache and Coconino counties. If all counties had the lowest observed county-specific NMR and PNMR, the hypothetical state IMR would have been 7 deaths per 1,000 live births and 907 babies would not have died from 1983 to 1988.

Three rural counties, Cochise, Pinal and Yavapai, had greater neonatal than postneonatal mortality, the relationship between the two components of infant mortality seen in the metropolitan counties. Postneonatal exceeded neonatal mortality in 4 of the 5 remaining counties. The degree of exceedance was greatest for Navajo county (28 percent), followed by Mohave (21 percent), Apache (11 percent) and Coconino county (8 percent). The postneonatal and neonatal mortality rates were identical for Yuma county.

In 1988, infants died from respiratory distress syndrome at the decade's lowest rate[a] (Table 3-5). The 42 percent reduction in rate from 1980 to 1988 meant that one in 20 infants died from respiratory distress syndrome in 1988 compared to one in 10 in 1980. Congenital anomalies not involving the circulatory, respiratory or central nervous systems was the other cause of infant death with the lowest rate of the decade in 1988.[b]

The 1988 rate for each of the other causes of infant death listed in Table 3-5 was neither the highest nor the lowest of the decade. However, the 1988 death rate for other perinatal conditions was the highest of the past six years. Other perinatal conditions is not a single cause but a combination of 15 distinct categories of causes. Five examples are complications of the placenta, cord and membranes affecting the fetus or newborn; infections specific to the perinatal period such as congenital rubella, cytomegalovirus and herpes; maternal conditions unrelated to the present pregnancy such as renal disorders and hypertension; perinatal disorder of digestive system; and other and ill-defined conditions originating in the perinatal period. These five categories accounted for 84 percent of the infant deaths classified under other perinatal conditions in 1988. Unfortunately, 75 percent of the increase from 1987 to 1988 occurred in deaths from unspecified and ill-defined other conditions, making it the most prevalent category, so the actual cause(s) underlying the high death rate is unknown.

Infants in 1988 died from disorders related to low birthweight and short gestation at a rate lower than the 1987 rate but still higher than the 1980-86 annual rates. The 1988 rate also was the decade's second-highest for sudden infant death syndrome (SIDS). After the 1987-88 increase in rate, SIDS again became the single leading cause of infant death as it had been from 1980 to 1986. SIDS and disorders related to low birthweight and short gestation caused no more than 25 percent of infant deaths annually from 1980 to 1985. Since 1986, at least 31 percent of infant deaths are due to either of these causes.

Temporal trends in the mortality rates for the remaining causes were erratic. The 1988 rate for each cause was within the range in which annual rates varied during the past six years. Lastly, 11 percent of 1988 infant deaths arose from causes not listed in Table 3-5.

The high 1988 mortality risk did not apply equally to infants of different sexes or ethnic groups (Table 3-6). In 1988, female infants died at the highest rate of the past four years, while male infants died at the lowest rate. The high IMR for female babies stemmed from increased mortality risk among white non-Hispanic, Hispanic, and Black infants but not Native American infants. Since 1986, the IMR increased by 46 percent for female Hispanic infants and by 79 percent for female Black infants. The mortality excess of female Black relative to female white infants more than tripled from 29 percent in 1985 to 104 percent in 1988. Less than a 10 percent differential in mortality risk existed between female white non-Hispanic and female Hispanic infants in 1988.

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[a] The IMR for respiratory distress syndrome was 1.2/1,000 and 0.5/1,000 in 1980 and in 1988 respectively.

[b] The IMR for other congenital anomalies was 0.9/1,000 and 0.7/1,000 in 1980 and in 1988 respectively.

The low 1988 IMR for male babies stemmed from a 1988 mortality risk which was the lowest of the 1985-88 period for male white non-Hispanic infants and Native American infants but not male Hispanic or Black babies. The reduction in IMR for male Native American infants made their 1988 mortality risk lower than that for male white infants for the first time in the past four years. In contrast, the increased mortality risk for male Hispanic infants resulted in a higher IMR than that for white non-Hispanic infants for the first time during these years. Black male babies were at least 77 percent more likely to die before their first birthday in 1988 than male babies of any other ethnicity.

TABLE 3-1

INFANT MORTALITY RATES[1] BY COUNTY OF RESIDENCE, ARIZONA AND UNITED STATES, 1950 - 1988

COUNTY	1950	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
U.S.[2]	29.2	26.0	24.7	20.0	16.1	12.6	11.9	11.5	11.2	10.8	10.6	10.4	10.0	9.9
ARIZONA	45.7	31.8	25.3	17.8	14.8	12.4	11.6	9.3	9.6	9.5	9.6	9.4	9.4	9.7
Apache	106.4	55.4	32.5	26.3	18.8	14.1	14.9	11.4	11.2	13.8	11.9	9.1	8.6	5.3
Cochise	34.0	26.7	32.7	14.1	15.9	12.1	13.4	9.0	12.8	14.2	9.6	5.2	6.8	8.5
Coconino	61.2	46.1	44.4	27.7	21.6	10.9	11.5	9.0	12.2	8.8	10.8	9.8	7.5	11.2
Gila	48.8	47.0	49.0	15.9	16.5	17.0	6.6	16.0	7.3	4.5	7.8	12.8	5.3	10.6
Graham	57.1	44.9	30.0	24.3	18.8	15.6	27.5	8.5	6.9	15.7	9.8	12.7	9.0	7.2
Greenlee	34.1	27.5	23.5	38.8	23.5	18.3	3.3	19.5	-	10.3	18.6	9.4	-	18.0
La Paz	NA	NA	NA	NA	NA	NA	NA	NA	33.9	5.1	25.6	-	5.1	9.3
Maricopa	37.3	26.9	20.9	15.5	14.4	13.4	12.0	9.3	9.2	8.9	9.4	9.6	10.0	10.0
Mohave	47.8	21.7	31.3	6.5	11.0	20.7	9.0	12.4	9.7	8.1	7.2	10.3	8.5	12.2
Navajo	107.3	64.4	45.2	29.0	20.2	14.2	16.0	9.6	12.0	9.7	13.7	6.3	15.6	10.7
Pima	28.7	27.3	18.4	17.3	11.1	8.1	9.2	8.3	9.7	9.9	9.1	9.0	7.7	9.3
Pinal	68.9	38.6	30.5	23.2	18.1	9.2	9.0	9.8	9.1	14.6	8.8	13.1	8.9	7.2
Santa Cruz	48.0	26.1	21.1	16.8	13.8	6.0	9.6	6.1	6.6	7.8	7.6	7.9	12.8	12.0
Yavapai	38.6	30.2	30.7	14.7	12.6	11.8	15.0	9.4	10.7	11.0	8.3	11.5	9.4	10.1
Yuma	50.5	32.9	31.3	19.4	15.5	14.6	11.3	8.4	8.3	6.9	9.7	6.1	9.1	7.6

[1] Per 1,000 live births

[2] U.S. data furnished by the National Center for Health Statistics; 1988 data are provisional

TABLE 3-2

INFANT, NEONATAL AND POSTNEONATAL MORTALITY RATES AND PERCENT POSTNEONATAL DEATHS, ARIZONA, UNITED STATES, 1950 - 1988

	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	Percent Change From 1987
UNITED STATES														
Infant mortality[1]	29.2	26.0	20.0	16.1	12.6	11.9	11.5	11.2	10.8	10.6	10.4	10.0	9.9	-1.0
Neonatal mortality[1]	20.6	18.7	15.1	11.8	8.4	7.9	7.7	7.3	6.9	6.9	6.7	6.5	6.4	-1.5
Postneonatal mortality[1]	8.6	7.3	4.9	4.3	4.2	4.0	3.8	3.9	3.9	3.7	3.7	3.5	3.5	0.0
Percent postneonatal deaths[2]	29.5	28.1	24.5	26.7	33.3	33.6	33.0	33.0	36.1	34.9	35.6	35.5	36.0	+1.4
ARIZONA														
Infant mortality[1]	45.7	31.8	17.8	14.8	12.4	11.6	9.3	9.6	9.5	9.6	9.4	9.4	9.7	+3.2
Neonatal mortality[1]	26.6	19.4	12.4	9.6	8.3	7.4	5.8	5.9	5.5	5.9	5.4	5.9	5.9	0.0
Postneonatal mortality[1]	19.1	12.4	5.4	5.2	4.1	4.2	3.5	3.7	4.0	3.8	4.0	3.5	3.8	+8.6
Percent postneonatal deaths[2]	41.8	39.0	30.3	35.1	33.1	36.2	37.6	38.5	42.1	39.6	42.6	37.1	39.2	+5.7

[1] Rates per 1,000 live births. The U.S. rates are from the National Center for Health Statistics: Annual Summary of Births, Marriages, Divorces and Deaths.

[2] Total infant mortality = 100 percent

TABLE 3-3

NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY BY COUNTY OF RESIDENCE WITH RATES,[1] ARIZONA, 1988

County of Residence	INFANT DEATHS Total	Neonatal	Post-Neonatal	RATES Total	Neonatal	Post-Neonatal
ARIZONA	634	384	250	9.7	5.9	3.8
Apache	10	5	5	5.3	2.6	2.6
Cochise	14	7	7	8.5	4.3	4.3
Coconino	22	14	8	11.2	7.1	4.1
Gila	7	5	2	10.6	7.6	3.0
Graham	3	2	1	7.2	4.8	2.4
Greenlee	2	2	0	18.0	18.0	-
La Paz	2	2	0	9.3	9.3	-
Maricopa	382	244	138	10.0	6.4	3.6
Mohave	15	5	10	12.2	4.0	8.1
Navajo	21	7	14	10.7	3.6	7.1
Pima	104	65	39	9.3	5.8	3.5
Pinal	15	9	6	7.2	4.3	2.9
Santa Cruz	8	3	5	12.0	4.5	7.5
Yavapai	13	8	5	10.1	6.2	3.9
Yuma	16	6	10	7.6	2.9	4.8

[1] Per 1,000 live births

TABLE 3-4

SIX-YEAR RATES[1] OF NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY BY METROPOLITAN AND NON-METROPOLITAN COUNTIES[2] IN ARIZONA, 1983-1988

Region/County of Residence	INFANT DEATHS			RATES		
	Total	Neonatal	Post-Neonatal	Total	Neonatal	Post-Neonatal
STATEWIDE TOTAL	3,407	2,058	1,349	9.5	5.8	3.8
METROPOLITAN COUNTIES	2,507	1,589	918	9.4	6.0	3.4
Maricopa	1,947	1,218	729	9.6	6.0	3.6
Pima	560	371	189	9.0	6.0	3.0
NON-METROPOLITAN COUNTIES	900	469	431	9.8	5.1	4.7
Apache	109	51	58	9.9	4.7	5.2
Cochise	91	58	33	9.6	6.1	3.5
Coconino	114	54	60	10.0	4.8	5.2
Gila	31	19	12	8.1	4.9	3.2
Graham	26	14	12	10.2	5.5	4.7
Greenlee	8	7	1	9.1	7.9	1.2
La Paz	18	11	7	13.9	8.5	5.4
Mohave	60	27	33	9.5	4.3	5.2
Navajo	131	58	73	11.4	5.0	6.4
Pinal	123	66	57	10.2	5.5	4.7
Santa Cruz	30	20	10	9.4	6.2	3.2
Yavapai	68	38	30	10.1	5.7	4.4
Yuma	91	46	45	8.0	4.0	4.0

[1] Rates calculated per 1,000 live births for the entire period, 1983-1988.
[2] Data by county of residence.

TABLE 3-5

INFANT MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES OF DEATH,[2] ARIZONA, 1983 - 1988

CAUSE OF DEATH	ICD Codes	1983	1984	1985	1986	1987	1988	Percent Change From 1987
Certain conditions in perinatal period	760-779	3.6	3.4	3.4	3.8	3.9	3.9	0.0
Low birthweight/ short gestation	765	0.7	0.8	0.9	1.0	1.9	1.2	-36.8
Respiratory distress syndrome	769	0.8	0.7	0.8	0.7	0.7	0.5	-28.6
Other respiratory	770	0.6	0.9	0.5	0.7	0.4	0.6	+50.0
Intrauterine hypoxia or birth asphyxia	768	0.2	0.2	0.3	0.1	0.1	0.2	+100.0
Maternal complications	761	0.2	0.1	0.2	0.3	0.1	0.2	+100.0
Other perinatal conditions	760,762-764 766-767, 771-779	1.1	0.7	0.8	0.9	0.7	1.3	+85.7
Congenital anomalies	740-759	2.6	2.4	2.6	2.0	2.3	2.4	+4.3
Circulatory system	745-747	1.1	1.0	1.0	0.6	0.8	1.1	+37.5
Respiratory system	748	0.2	0.2	0.4	0.2	0.4	0.3	-25.0
Central nervous system	740-742	0.4	0.3	0.3	0.3	0.3	0.3	0.0
Other congenital anomalies	743-744, 749-759	0.9	0.9	0.8	0.8	0.8	0.7	-12.5
Sudden infant death syndrome	798.0	1.6	1.5	1.5	1.9	1.5	1.8	+20.0
Accidents/adverse effects	800-949	0.2	0.2	0.4	0.3	0.4	0.3	-25.0
Pneumonia/influenza	480-487	0.2	0.3	0.2	0.2	0.2	0.2	0.0
All causes		9.6	9.5	9.6	9.4	9.4	9.7	+3.2

[1] Infant mortality rates are presented per 1,000 live births.
[2] The five causes with the greatest number of deaths over the 1983-1988 period.

TABLE 3-6

NUMBER AND RATE[1] OF INFANT DEATHS BY CHILD'S ETHNIC GROUP AND GENDER, ARIZONA, 1985-1988

	1985		1986		1987		1988	
Ethnic Group	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All ethnic groups[2]								
Total	572	9.6	569	9.4	598	9.4	634	9.7
Male	350	11.5	338	10.9	347	10.7	352	10.5
Female	222	7.7	231	8.3	251	8.1	282	8.8
White[3]								
Total	344	9.9	330	8.9	330	9.0	333	9.0
Male	220	12.3	199	10.3	200	10.7	188	9.9
Female	124	7.3	136	7.5	130	7.4	145	8.1
Hispanic								
Total	120	8.0	129	7.5	141	8.0	181	9.9
Male	68	8.8	77	8.9	79	8.8	101	10.9
Female	52	7.1	52	6.1	62	7.2	80	8.9
Black								
Total	32	12.7	41	15.0	45	15.6	55	17.9
Male	20	16.0	29	20.4	23	15.6	30	19.3
Female	12	9.4	12	9.2	22	15.6	25	16.5
Native American								
Total	72	12.2	67	11.8	79	13.2	61	9.9
Male	38	13.0	37	13.2	45	15.0	30	9.6
Female	34	11.4	30	10.5	34	11.5	31	10.2

[1] Rate per 1,000 live births in specified ethnic/gender group.
[2] Includes records with other and unknown ethnic group.
[3] Includes only whites of non-Hispanic origin.

Childhood Mortality

All causes of death claimed the lives of 315 of the 808,134 children (1 to 14 year olds) residing in Arizona in 1988. The 1988 total mortality rate of 39 deaths per 100,000 children was 11 percent higher than the 1987 rate but 5 percent lower than the 1983 rate (Table 3-7). It was the second lowest rate of both the past six years and the decade. One in 2,564 children died in 1988 compared to one in 2,188 in 1980.

Four of the five leading causes of childhood death contributed to the 1987-88 increase in total mortality. From 1987 to 1988, death rates for homicide more than doubled and death rates for congenital anomalies, unintentional injuries and malignant neoplasms increased by 39, 10 and 3 percent respectively. However, the five 1988 cause-specific death rates were not the highest of the past six years.

Gender Differences. The one-year increase in total mortality was four times larger for girls than for boys (Table 3-7). The smaller increase for boys was due to a declining death rate for unintentional injuries, the leading cause of childhood death, making the 1988 rate the lowest of the six-year period. Motor vehicle collisions account for most unintentional injury fatalities among children. The 1988 vehicular fatality rate was the lowest of the six years for boys but the highest for girls. Moreover, in 1988 girls exceeded boys in rate of death from this cause for the first time in this decade. From 1980 to 1987, boys compared to girls annually were 90 percent more likely on average to die from vehicular unintentional injuries; in 1988 they were 9 percent less likely.

In sharp contrast, girls drowned in 1988 at the lowest rate of the decade and were 59 percent less likely to drown than boys. Drownings among boys were more frequent in 1988 than 1987 but still below the decade-record of 31 in 1981. The 1988 death rate for other unintentional injuries also was the decade's lowest for girls but not for boys. Boys were 152 percent more likely than girls to die from other unintentional injuries in 1988.

The 1988 death rates of boys and of girls for cancer and for congenital anomalies were intermediate between the high and low rates of the decade. In contrast, girls were murdered in 1988 at the highest rate of the decade;[a] the 1988 homicide death rate of boys was the third highest of the decade. Thus, sustained reductions in death rates for cancer, congenital anomalies and homicide did not occur for children of either gender.

The fifth leading cause of death was diseases of the heart for boys and pneumonia and influenza for girls. Girls in 1988 died from pneumonia/influenza at a rate which was the highest of the past six years but below the rates of 1980 and 1982. The 1988 death rate of boys for heart diseases fell between the decade's highest and lowest rates.

Regional Differences. Trends in mortality differed greatly for children living in urban or rural regions of the state (Table 3-8). From 1980 to 1988, the chance of death increased 7 percent for rural children but declined 23 percent for urban children. In 1980 the mortality disadvantage of rural compared to urban children was 18 percent; by 1988, it had increased to 63 percent. If rural children had the same mortality risk as urban children in 1988, 45 rural children would not have died.

The deteriorating survival chances of rural children through this decade primarily stemmed from two causes of death, unintentional motor vehicle injuries and intentional injuries inflicted by others. Motor vehicles fatally injured rural children at a 33 percent

[a] The homicide death rate of girls was 1.7/100,000 in 1980 and 2.8/100,000 in 1988.

higher rate in 1988 than in 1980. Rural children were 2.7 times more likely to be murdered in 1988 than 1980; their 1988 homicide death rate was the decade's highest.[b]

Rural children in 1988 were 31 percent more likely to be fatally injured by a motor vehicle collision than were urban children in 1970 (rate = 11.3). However, in 1980 rural children were 13 percent less likely to be victims of vehicular-inflicted injuries than were urban children (rates of 11.1 and 12.7 respectively). Growing mortality risk for rural children was not accompanied by a clear decline in risk for urban children. Nonetheless, the 1988 rate for urban children was 38 percent lower than the 1980 rate.

The decade-low drowning death rate of urban children seen in 1987 was repeated in 1988. Rural children were less fortunate, with their 1988 drowning death rate higher than annual rates from 1982 to 1984. Other unintentional injuries claimed urban children's lives in 1988 at the second lowest rate of the decade. Fires, falls, etc. were 42 percent less likely to claim rural children's lives in 1988 than in 1980.

Death rates for cancer and congenital anomalies in 1988 were neither the highest nor lowest of the past six years for children in either region. In contrast, the 1988 death rate for diseases of the heart, the fifth leading cause of death for rural children, was the six-year high. Infectious diseases, the fifth leading cause of death of urban children, claimed lives at the second-highest rate of the decade in 1988.

Repeating a finding in five prior years, the mortality rate for rural girls in 1988 again exceeded the 1980 rate of 34.4 and was the highest rate of the past six years (Table 3-9). Rural girls were the only gender by region subgroup with a poorer mortality risk in 1988 than in 1980. Compared to 1980, the 1988 mortality risk for rural boys was 5 percent lower, for urban girls 17 percent lower and for urban boys 27 percent lower. Not only did urban boys have the greatest reduction in risk but they were also the only group whose 1988 mortality rate was the lowest of the decade.[c] For every death per 100,000 urban girls in 1988, 1.3 deaths per 100,000 urban boys, 1.5 deaths per 100,000 rural girls and 2.2 deaths per 100,000 rural boys occurred.

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[b] The homicide death rate of rural children was 1.8/100,000 in 1980 and 4.8/100,000 in 1988.

[c] The total mortality rate of urban boys was 51.6/100,000 in 1980 and 37.6/100,000 in 1988.

TABLE 3-7

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG CHILDREN (1-14 years) BY GENDER, ARIZONA, 1983 - 1988

GENDER/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
MALE							
Unintentional injuries	26.0	22.3	27.5	27.3	21.8	21.2	- 2.8
Motor vehicle-related	11.0	11.6	12.9	14.0	11.4	9.2	- 19.3
Drowning	7.2	4.1	6.2	7.7	5.1	6.1	+ 19.6
Other	7.8	6.6	8.4	5.6	5.3	5.8	+ 9.4
Malignant neoplasms	3.9	4.6	2.5	5.6	4.1	3.7	- 9.8
Congenital anomalies	4.2	5.5	3.1	3.1	2.5	3.7	+ 48.0
Homicide	1.8	3.5	3.1	1.6	1.5	3.4	+126.7
Diseases of heart	1.8	1.4	0.6	2.1	1.0	1.2	+ 20.0
All causes	48.7	48.3	49.6	52.1	42.4	44.5	+ 5.0
(Number of all deaths)	(163)	(167)	(177)	(197)	(167)	(183)	+ 9.6
FEMALE							
Unintentional injuries	12.0	17.0	10.7	15.3	11.3	14.9	+ 31.9
Motor vehicle-related	4.1	7.9	4.9	7.1	6.1	10.1	+ 65.6
Drowning	4.1	5.8	2.9	3.8	2.9	2.5	- 13.8
Other	3.8	3.3	2.9	4.4	2.4	2.3	- 4.2
Malignant neoplasms	4.1	1.8	4.4	4.1	3.2	3.8	+ 18.8
Congenital anomalies	5.0	4.8	2.3	2.7	2.1	2.8	+ 33.3
Homicide	1.2	2.7	1.7	1.9	1.3	2.8	+115.4
Pneumonia and influenza	1.2	1.2	0.6	1.4	0.8	1.5	+ 87.5
All causes	33.2	36.1	28.5	32.9	27.7	33.3	+ 20.2
(Number of all deaths)	(106)	(119)	(98)	(120)	(105)	(132)	+ 25.7
TOTAL							
Unintentional injuries	19.0	19.7	19.3	21.4	16.7	18.1	+ 8.4
Motor vehicle-related	7.6	9.8	9.0	10.6	8.8	9.7	+ 10.2
Drowning	5.6	4.9	4.6	5.8	4.0	4.1	+ 2.5
Other	5.8	5.0	5.7	5.0	3.9	4.3	+ 10.3
Malignant neoplasms	4.0	3.3	3.4	4.8	3.6	3.7	+ 2.8
Congenital anomalies	4.6	5.2	2.7	3.0	2.3	3.2	+ 39.1
Homicide	1.5	3.1	2.4	1.7	1.4	3.1	+121.4
Diseases of heart	1.4	1.0	0.4	1.7	1.6	1.2	- 25.0
All causes	41.1	42.4	39.2	42.7	35.2	39.0	+ 10.8
(Number of all deaths)	(269)	(286)	(275)	(317)	(272)	(315)	+ 15.8

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over the 1983-1988 period

TABLE 3-8

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG CHILDREN (1-14 years) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1983 - 1988

AREA/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Unintentional injuries	16.6	17.7	17.4	18.8	14.9	14.6	- 2.0
Motor vehicle-related	6.4	9.4	8.6	8.8	7.7	7.9	+ 2.6
Drowning	6.2	5.7	4.1	5.9	4.0	4.0	0.0
Other	4.0	2.6	4.7	4.0	3.2	2.7	- 15.6
Malignant neoplasms	4.2	3.5	3.1	5.7	3.2	4.0	+ 25.0
Congenital anomalies	3.8	4.3	3.5	2.8	2.5	3.5	+ 40.0
Homicide	1.7	2.8	2.8	1.5	1.9	2.5	+ 31.6
Infectious diseases	0.9	1.2	0.6	1.9	0.9	1.5	+ 66.7
All causes	36.3	37.9	37.4	40.1	34.1	33.5	- 1.8
(Number of all deaths)	(171)	(186)	(190)	(218)	(194)	(200)	+ 3.1
RURAL							
Unintentional injuries	25.7	24.9	23.9	28.5	21.5	28.1	+ 30.7
Motor vehicle-related	10.9	10.8	9.9	15.5	11.7	14.8	+ 26.5
Drowning	4.4	2.7	5.7	5.5	3.9	5.2	+ 33.3
Other	10.4	11.4	8.3	7.5	5.9	8.1	+ 37.3
Congenital anomalies	6.6	7.6	0.5	3.5	2.0	2.4	+ 20.0
Malignant neoplasms	3.0	2.7	4.2	2.5	4.9	2.9	- 40.8
Homicide	1.1	3.8	1.6	2.5	0.0	4.8	-
Diseases of heart	1.6	2.7	1.6	2.5	2.0	2.9	+ 45.0
All causes	53.6	54.2	44.3	49.6	38.1	54.7	+ 43.6
(Number of all deaths)	(98)	(100)	(85)	(99)	(78)	(115)	+ 47.4
STATEWIDE							
Unintentional injuries	19.0	19.7	19.3	21.4	16.7	18.1	+ 8.4
Motor vehicle-related	7.6	9.8	9.0	10.6	8.8	9.7	+ 10.2
Drowning	5.6	4.9	4.6	5.8	4.0	4.1	+ 2.5
Other	5.8	5.0	5.7	5.0	3.9	4.3	+ 10.3
Malignant neoplasms	4.0	3.3	3.4	4.8	3.6	3.7	+ 2.8
Congenital anomalies	4.6	5.2	2.7	3.0	2.3	3.2	+ 39.1
Homicide	1.5	3.1	2.4	1.7	1.4	3.1	+121.4
Diseases of heart	1.4	1.0	0.4	1.7	1.6	1.2	- 25.0
All causes	41.1	42.4	39.2	42.7	35.2	39.0	+ 10.8
(Number of all deaths)	(269)	(286)	(275)	(317)	(272)	(315)	+ 15.8

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over the 1983-1988 period.

[3] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-9

MORTALITY RATES[1] AMONG CHILDREN (1-14 years) BY GENDER IN URBAN AND RURAL AREAS,[2] ARIZONA, 1983 - 1988

AREA/GENDER	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Male	43.5	41.7	48.6	48.3	40.2	37.6	- 6.5
Female	28.7	33.9	25.5	31.6	27.7	29.1	+ 5.1
Total	36.3	37.9	37.4	40.1	34.1	33.5	- 1.8
RURAL							
Male	61.9	65.5	52.3	62.8	48.9	64.2	+ 31.3
Female	44.8	42.3	36.4	36.2	27.5	45.1	+ 64.0
Total	53.6	54.2	44.3	49.6	38.1	54.7	+ 43.6
STATEWIDE							
Male	48.7	48.3	49.6	52.1	42.4	44.5	+ 5.0
Female	33.2	36.1	28.5	32.9	27.7	33.3	+ 20.2
Total	41.1	42.4	39.2	42.7	35.2	39.0	+ 10.8

[1] Rates are presented per 100,000 population.

[2] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Adolescent Mortality

The lives of 262 of the 254,317 resident adolescents (15-19 year olds) prematurely ended in 1988, resulting in a total mortality rate of 103 per 100,000 adolescents. This mortality rate was 11 percent greater than the 1983 rate and 2 percent greater than the 1987 rate. However, annual mortality rates were higher from 1984 to 1986 (Table 3-10). One in 971 adolescents died in 1988 compared to one in 1,081 in 1983.

Diseases of the heart was the only leading cause of death with the lowest rate of the past six years in 1988. Annual rates of death from heart disease progressively declined since the decade-high rate in 1985. Only two adolescents died from heart disease in 1988.

The other four cause-specific rates were neither the highest nor the lowest of the past six years in 1988. In addition, clearly declining or increasing trends were not evident in the annual death rates for unintentional injuries, suicide, homicide and cancer. While annual cancer death rates for 1986 to 1988 progressively improved from the decade-high rate seen in 1985, the 1988 rate still exceeded the 1983 rate.

Since 1980, at least 8 out of 10 adolescent deaths were due to unintentional and intentional injuries. The 1988 death rates for unintentional injuries, suicide and homicide exceeded the corresponding 1983 rates by 9, 29 and 28 percent respectively. Despite the decrease from the historically-high suicide death rate of 1987, adolescents in 1988 killed themselves at the second highest rate in recorded history. Nearly one out of five adolescents (18 percent) who died in 1988 did so by their own hand.

Guns were the fatal agent for 67 percent of the 136 Arizona adolescent suicides from 1986 to 1988.[1] Firearms were used significantly less frequently (45 percent; $t = 3.61$, $p < .001$) by the 131 adolescents who committed suicide in Washington state during 1985-87, the latest three-year period with comparative data available from another western state.[2] The Washington state study also conservatively estimated that 8 adolescents attempted suicide for every adolescent suicide fatality. If the same ratio of suicide attempts to fatalities applies to Arizona, that means that nearly 1,100 adolescents tried to kill themselves during 1986 to 1988. The 1988 suicide morbidity rate would thus be 147.8 per 100,000 adolescents or one in 677 adolescents intentionally injured him/herself.

Gender Differences. Females were responsible for the 1987-88 decline in the suicide death rate, with five fewer deaths in 1988 than 1987 while the number of male deaths was constant. In contrast, both genders equally contributed to the 1987-88 increase in the death rates for motor-vehicle related unintentional injuries and homicide. From 1987 to 1988, the death rate for unintentional injuries not involving motor vehicles decreased for males but increased for females. The 1988 death rate for each of these types of injuries was neither the six-high highest nor lowest for either gender.

In contrast, the 1988 female adolescent death rate for cancer was the six-year highest but the 1988 male cancer death rate was the six-year lowest. Cancer claimed female compared to male lives at a 62 percent higher rate in 1988, a reversal in standing between the genders which occurred only once before in 1980. Unintentional injuries, suicide and homicide were at least a 2.9 times greater mortality risk for male than female adolescents. The two genders had identical 1988 heart disease death rates, but this rate was the six-year lowest for male adolescents.

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[1] Mrela, C.K. Suicide Mortality: Arizona, 1983-1988. Phoenix, AZ: Arizona Department of Health Services, September 1989.

[2] Starzyk, P. Suicide attempts and deaths in Washington state, 1985-87. Olympia, WA: Department of Social and Health Services, June 1989.

Regional Differences. Neither urban nor rural adolescents had better survival chances in 1988 than in 1983 (Table 3-11). Adolescents in both regions died due to unintentional injuries and suicide at higher rates in 1988 than in 1983. Indeed, the suicide death rate for rural adolescents was the highest of the decade, fully 33 percent greater than the prior decade-high rate in 1987. Rural compared to urban adolescents were twice as likely to kill themselves and 54 percent more likely to die from an unintentional injury in 1988.

Despite laws passed in 1983 providing larger penalties while driving intoxicated and raising the legal drinking age to 21 years, the 1988 motor vehicle fatality rate barely differed from the 1980 rate for urban (39.6 and 40.8 respectively) or for rural adolescents (63.4 and 62.2 respectively). Moreover, the 1988 motor vehicle fatality rate of Arizona 15 to 19 year olds was 49 percent greater than the rate for 15 to 24 year olds nationally.[3]

Other unintentional injuries killed urban adolescents in 1988 at the six-year highest rate, while rural adolescents improved in mortality risk from this cause. Rural adolescents had a greater improvement in their risk of death from homicide, with the 1988 rate the lowest of the decade. In contrast, the 1988 homicide death of urban adolescents was higher than annual rates in seven earlier years of the decade.

No rural adolescents died from heart disease in 1988 for the first time in the decade and urban adolescents died from this cause at the decade-lowest rate, a repeat of the 1987 rate. Cancer posed a higher mortality threat to urban adolescents in 1988 than in 1983, while the 1988 cancer death rate of rural adolescents was the six-year lowest.

Males in either region and urban females had a higher mortality risk in 1988 than in 1983 (Table 3-12). The 1988 mortality risk of rural females was lower than their 1983 risk but worse than their 1980 risk, while the other three groups had improved relative to 1980. For every death per 100,000 urban female adolescents in 1988, 1.5 deaths per 100,000 rural female adolescents, 2.8 deaths per 100,000 urban male adolescents and 4.0 deaths per 100,000 rural male adolescents occurred.

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[3] National Center for Health Statistics. Annual summary of births, marriages, divorces, and deaths, United States, 1988. Hyattsville, MD: Public Health Service, July 1989.

TABLE 3-10

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ADOLESCENTS (15-19 years) BY GENDER, ARIZONA, 1983 - 1988

GENDER/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
MALE							
Unintentional injuries	72.7	101.6	78.6	91.4	82.9	86.5	+ 4.3
Motor vehicle-related	56.6	84.5	66.8	72.6	59.5	66.1	+ 11.1
Other than motor vehicle	16.1	17.1	11.8	18.8	23.4	20.4	- 12.8
Suicide	21.1	17.9	26.2	26.1	30.6	29.9	- 2.3
Homicide	12.7	15.4	9.3	19.6	12.9	15.7	+ 21.7
Malignant neoplasms	5.9	6.0	10.2	5.7	5.6	3.9	- 30.4
Diseases of heart	1.7	2.6	2.5	4.1	2.4	0.8	- 66.7
All causes	130.1	161.4	146.4	158.4	146.4	151.0	+ 3.1
(Number of all deaths)	(163)	(189)	(173)	(194)	(182)	(192)	+ 5.5
FEMALE							
Unintentional injuries	30.1	29.4	44.0	44.6	25.6	29.9	+ 16.8
Motor vehicle-related	26.7	25.1	37.2	41.4	21.6	25.2	+ 16.7
Other than motor vehicle	3.4	4.3	6.8	3.2	4.0	4.7	+ 17.5
Suicide	7.7	6.1	8.5	4.0	11.2	7.1	- 36.6
Homicide	3.4	7.8	6.8	8.1	3.2	3.9	+ 21.9
Malignant neoplasms	1.7	1.7	4.2	5.7	5.6	6.3	+ 12.5
Diseases of heart	0.9	0.9	3.4	0.0	0.0	0.8	-
All causes	54.2	52.8	74.5	72.2	56.8	55.1	- 3.0
(Number of all deaths)	(63)	(61)	(88)	(89)	(71)	(70)	- 1.4
TOTAL							
Unintentional injuries	51.6	65.8	61.3	67.5	54.2	58.2	+ 7.4
Motor vehicle-related	41.8	55.0	52.0	56.9	40.5	45.6	+ 12.6
Other than motor vehicle	9.8	10.8	9.3	10.6	13.7	12.6	- 8.0
Suicide	14.5	12.0	17.3	15.0	20.9	18.5	- 11.5
Homicide	8.1	11.6	8.0	13.8	8.0	9.8	+ 22.5
Malignant neoplasms	3.8	3.9	7.2	5.7	5.6	5.1	- 8.9
Diseases of heart	1.3	1.7	3.0	2.0	1.2	0.8	- 33.3
All causes	92.5	107.5	110.4	115.1	101.5	103.0	+ 1.5
(Number of all deaths)	(217)	(250)	(261)	(283)	(253)	(262)	+ 3.6

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[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over the 1983-1988 period

TABLE 3-11

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ADOLESCENTS (15-19 years) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1983 - 1988

AREA/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Unintentional injuries	43.6	56.0	56.8	57.1	41.7	51.2	+ 22.8
Motor vehicle-related	36.1	48.4	47.6	47.2	31.4	39.6	+ 26.1
Other than motor vehicle	7.5	7.6	9.2	9.9	10.3	11.6	+ 12.6
Suicide	12.8	12.2	21.8	13.2	20.0	14.3	- 28.5
Homicide	7.5	11.7	6.3	16.5	9.2	12.2	+ 32.6
Malignant neoplasms	4.1	4.1	4.0	6.0	5.4	5.8	+ 7.4
Diseases of heart	1.2	1.8	2.9	2.2	1.1	1.1	0.0
All causes	77.9	97.9	103.3	103.8	88.2	93.0	+ 5.4
(Number of all deaths)	(134)	(168)	(180)	(189)	(163)	(176)	+ 8.0
RURAL							
Unintentional injuries	73.4	93.5	74.0	98.7	90.1	78.8	- 12.5
Motor vehicle-related	57.4	73.8	64.4	84.6	66.8	63.4	- 5.1
Other than motor vehicle	16.0	19.7	9.6	14.1	23.3	15.5	- 34.0
Suicide	19.2	11.5	4.8	20.4	23.3	30.9	+ 32.6
Homicide	9.6	11.5	12.9	6.3	4.7	3.1	- 34.0
Malignant neoplasms	3.2	3.3	16.1	4.7	6.2	3.1	- 50.0
Diseases of heart	1.6	1.6	3.2	1.6	1.6	-	-100.0
All causes	132.5	134.4	130.4	147.3	139.8	132.9	- 4.9
(Number of all deaths)	(83)	(82)	(81)	(94)	(90)	(86)	- 4.4
STATEWIDE							
Unintentional injuries	51.6	65.8	61.3	67.5	54.2	58.2	+ 7.4
Motor vehicle-related	41.8	55.0	52.0	56.9	40.5	45.6	+ 12.6
Other than motor vehicle	9.8	10.8	9.3	10.6	13.7	12.6	- 8.0
Suicide	14.5	12.0	17.3	15.0	20.9	18.5	- 11.5
Homicide	8.1	11.6	8.0	13.8	8.0	9.8	+ 22.5
Malignant neoplasms	3.8	3.9	7.2	5.7	5.6	5.1	- 8.9
Diseases of heart	1.3	1.7	3.0	2.0	1.2	0.8	- 33.3
All causes	92.5	107.5	110.4	115.1	101.5	103.0	+ 1.5
(Number of all deaths)	(217)	(250)	(261)	(283)	(253)	(262)	+ 3.6

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over the 1983-1988 period.

[3] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-12

MORTALITY RATES[1] AMONG ADOLESCENTS (15-19 years) BY GENDER IN URBAN AND RURAL AREAS,[2] ARIZONA, 1983 - 1988

AREA/GENDER	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Male	117.5	141.2	135.7	139.0	122.9	136.5	+ 11.1
Female	36.6	53.9	70.5	68.4	53.2	48.9	- 8.1
Total	77.9	97.9	103.3	103.8	88.2	93.0	+ 5.4
RURAL							
Male	164.9	218.0	177.1	215.2	218.3	194.0	- 11.1
Female	99.6	49.8	85.3	82.6	66.9	72.7	+ 8.7
Total	132.5	134.4	130.4	147.3	139.8	132.9	- 4.9
STATEWIDE							
Male	130.1	161.4	146.4	158.4	146.4	151.0	+ 3.1
Female	54.2	52.8	74.5	72.2	56.8	55.1	- 3.0
Total	92.5	107.5	110.4	115.2	101.5	103.0	+ 1.5

[1] Rates are presented per 100,000 population.

[2] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Mortality of Young Adults

On an average day in 1988, more than 6 young adults aged 20 to 44 died. The 2,314 premature deaths among the 1,413,363 young adult residents of Arizona produced a 1988 mortality rate of 163.7 per 100,000 (Table 3-13), 9 percent greater than the 1983 rate. No improvement in survival chances between 1983 and 1988 meant that 187 young adults died in 1988 who would not have died if the mortality risk of 1983 applied.

The fact that 1988 death rates for both unintentional and intentional injuries were higher than 1983 rates accounted for the poorer survival odds of young adults. The largest increase occurred in the death rate for unintentional injuries not involving motor vehicles, with the 1988 rate the highest of the past six years. In contrast, the leading natural causes, i.e. heart disease and cancer, of death in young adulthood did not contribute to poorer survival since rates for both declined. In fact, the 1988 heart disease death rate was the lowest of the six-year period.

Gender Differences. The 1988 death rate of males, the second highest of the past six years, was only 2 percent less than the 1980 rate and 14 percent higher than the 1983 rate (Table 3-13). Female mortality not only declined nine times more (18 percent) from 1980 to 1988 but also was lower in 1988 than 1983. Poorer survival chances from 1983 to 1988 in this stage of life were overwhelmingly a male phenomenon. The male relative to female mortality risk grew from 2.2 times greater in 1983 to 2.5 times greater in 1988.

Male death rates in 1988 for other unintentional injuries, suicide and cancer exceeded both the corresponding 1983 and 1980 rates.[a] The 15 percent improvement from 1987 to 1988 in the male motor vehicle fatality rate just returned the 1988 rate to the 1983 level. Declines of less than 7 percent occurred in male death rates for homicide and heart disease from 1983 to 1988.

Females had the greatest six-year improvement among the leading causes in their mortality risk of cancer with a 15 percent decline. Smaller improvements were seen in female death rates for suicide and heart disease. Unintentional injuries and homicide posed a greater risk to females in 1988 than in 1983. Both the female homicide and other unintentional injury death rates were the highest of the six years in 1988.

Deaths from HIV infection disproportionately occur in this age group. Due to high public interest, some findings about deaths from HIV infection are presented even though it is not one of the five leading causes of death in Table 3-13. However, 1988 was the first year in which HIV infection became the fifth leading cause of death for young adults of one ethnicity, namely white non-Hispanics. White non-Hispanics comprised 87 percent of the HIV infection-related deaths. Males accounted for 122 of the 128 deaths from HIV infection for a mortality rate of 17.1 per 100,000 male young adults, a mortality rate similar in magnitude to 1988 male death rates for cancer and other unintentional injuries.

Regional Differences. Neither urban nor rural young adults had a lower mortality risk in 1988 than in 1983 (Table 3-14). Throughout this decade, urban young adults were less likely to die than rural adults, with an advantage of 27 percent in 1988. If urban young adults had the same mortality risk as rural adults in 1988, 630 more would have died.

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[a] The male death rates per 100,000 for other unintentional injuries, suicide and cancer were 30.5, 35.9 and 16.0 respectively in 1980 and 31.1, 37.1 and 18.4 respectively in 1988.

Urban young adults were fatally injured in events not involving motor vehicles and committed suicide[b] at the highest rates of the decade in 1988. Suicide was the only leading cause of death with a higher 1988 mortality rate for urban than rural young adults. The rural relative to urban risk of death was most elevated for motor vehicle-related unintentional injuries (118 percent), followed by other unintentional injuries (65 percent), homicide (22 percent), heart disease (14 percent) and cancer (4 percent).

From 1980 to 1988, the urban young adult motor vehicle fatality rate declined nearly four times more than the rural rate (38 and 10 percent respectively). The 1988 urban vehicular fatality rate was the lowest of the decade,[c] while the 1988 rural rate was at least 10 percent higher than rates in 1983 and 1984. About one in five young adults lived in rural areas, yet nearly two in five fatal vehicular injuries occurred in rural areas. More than one in four rural young adults died from injuries inflicted in motor vehicle incidents compared to approximately one in six urban young adults.

Female urban young adults, annually the gender by region subgroup with lowest mortality risk, were the only subgroup with a lower mortality rate in 1988 than 1983 (Table 3-15). Rural males were the only subgroup who had not progressed relative to 1980, with their 1988 mortality risk slightly higher than their 1980 risk.[d] Urban females improved the most from 1980 to 1988 with a 20 percent reduction in risk, followed by rural females with a 11 percent reduction. The 1988 mortality risk of urban males differed by a mere 2 percent from their 1980 risk.

The differing trends in mortality risk by both gender and region widened the mortality advantages or disadvantages among the groups. In 1980, for every death per 100,000 urban female young adults, 1.2 rural females, 2.0 urban males and 2.8 rural males per 100,000 died. By 1988, those relative ratios had become 3.5 rural male deaths, 2.5 urban male deaths and 1.4 rural female deaths for every one urban female young adult death.

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[b] The urban young adult suicide death rate was 22.2/100,000 in 1980 and 24.5/100,000 in 1988.

[c] The urban young adult vehicular fatality rate was 39.3/100,000 in 1980 and 24.5/100,000 in 1988.

[d] The 1980 total mortality rate of rural males was 297.1/100,000; 1988 rate was 301.5/100,000.

TABLE 3-13

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG YOUNG ADULTS (20-44 years) BY GENDER, ARIZONA, 1983 - 1988

GENDER/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
MALE							
Unintentional injuries	69.5	83.3	80.5	80.6	82.6	76.3	- 7.6
Motor vehicle-related	45.6	54.1	55.5	52.4	53.5	45.2	-15.5
Other than motor vehicle	23.9	29.2	25.0	28.2	29.1	31.1	+ 6.9
Suicide	33.6	35.9	34.5	36.7	37.3	37.1	- 0.5
Homicide	22.5	20.6	18.4	24.5	20.7	21.7	+ 4.8
Diseases of heart	17.8	16.8	19.7	20.6	17.8	16.8	- 5.6
Malignant neoplasms	17.8	16.1	17.8	15.6	19.1	18.4	- 3.7
All causes	205.3	216.2	219.0	235.1	230.5	233.1	+ 1.1
(Number of all deaths)	(1184)	(1303)	(1377)	(1565)	(1590)	(1664)	+ 4.7
FEMALE							
Unintentional injuries	19.4	20.5	21.1	24.8	22.3	22.0	- 1.3
Motor vehicle-related	13.6	15.4	15.8	18.8	17.1	15.7	- 8.2
Other than motor vehicle	5.8	5.1	5.3	6.0	5.2	6.3	+21.2
Malignant neoplasms	24.3	21.0	17.5	24.5	21.7	20.6	- 5.1
Suicide	12.0	7.4	8.8	12.2	10.5	10.3	- 1.9
Diseases of heart	7.2	6.7	6.1	5.0	8.0	6.6	-17.5
Homicide	4.9	4.9	6.1	6.1	5.3	7.3	+37.7
All causes	94.9	88.9	85.5	102.6	92.2	92.9	+ 0.8
(Number of all deaths)	(539)	(526)	(531)	(671)	(624)	(650)	+ 4.2
TOTAL							
Unintentional injuries	44.6	52.2	51.0	53.0	52.8	49.4	- 6.4
Motor vehicle-related	29.7	34.9	35.8	35.8	35.5	30.6	-13.8
Other than motor vehicle	14.9	17.2	15.2	17.2	17.3	18.8	+ 8.7
Suicide	22.9	21.8	21.8	24.6	24.0	23.8	- 0.8
Malignant neoplasms	21.0	18.5	17.7	20.0	20.4	19.5	- 4.4
Homicide	13.8	12.8	12.3	15.4	13.1	14.6	+11.5
Diseases of heart	12.6	11.8	13.0	12.9	13.0	11.7	-10.0
All causes	150.5	153.2	152.7	169.4	162.0	163.7	+ 1.0
(Number of all deaths)	(1723)	(1829)	(1908)	(2236)	(2214)	(2314)	+ 4.5

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988

TABLE 3-14

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG YOUNG ADULTS (20-44 years) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1983 - 1988

AREA/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Unintentional injuries	37.3	46.0	41.0	45.3	41.5	41.1	- 1.0
Motor vehicle-related	25.1	31.2	30.2	30.5	26.1	24.5	- 6.1
Other than motor vehicle	12.2	14.8	10.8	14.8	15.4	16.5	+ 7.1
Suicide	22.5	22.6	20.9	24.0	22.5	24.5	+ 8.9
Malignant neoplasms	20.9	17.8	17.6	19.6	19.5	19.3	- 1.0
Homicide	14.2	11.3	12.3	15.3	12.7	13.9	+ 9.4
Diseases of heart	10.7	10.8	11.9	12.0	11.9	11.4	- 4.2
All causes	136.6	142.2	138.6	158.1	146.3	151.7	+ 3.7
(Number of all deaths)	(1216)	(1330)	(1351)	(1636)	(1570)	(1688)	+ 7.5
RURAL							
Unintentional injuries	70.3	74.6	86.5	80.7	94.1	80.5	-14.5
Motor vehicle-related	45.9	48.3	55.6	54.7	69.9	53.3	-23.7
Other than motor vehicle	24.4	26.3	30.9	26.0	24.2	27.3	+12.8
Suicide	24.4	18.9	24.7	26.7	29.7	21.3	-28.3
Malignant neoplasms	21.6	21.2	17.8	21.4	23.9	20.0	-16.3
Diseases of heart	19.2	15.4	16.7	16.1	16.7	13.0	-22.2
Homicide	12.6	18.2	12.4	15.8	14.7	17.0	+15.6
All causes	199.0	192.8	202.4	210.4	219.5	208.3	- 5.1
(Number of all deaths)	(507)	(499)	(557)	(600)	(644)	(626)	- 2.8
STATEWIDE							
Unintentional injuries	44.6	52.2	51.0	53.0	52.8	49.4	- 6.4
Motor vehicle-related	29.7	34.9	35.8	35.8	35.5	30.6	-13.8
Other than motor vehicle	14.9	17.2	15.2	17.2	17.3	18.8	+ 8.7
Suicide	22.9	21.8	21.8	24.6	24.0	23.8	- 0.8
Malignant neoplasms	21.0	18.5	17.7	20.0	20.4	19.5	- 4.4
Homicide	13.8	12.8	12.3	15.4	13.1	14.6	+11.5
Diseases of heart	12.6	11.8	13.0	12.9	13.0	11.7	-10.0
All causes	150.5	153.2	152.7	169.4	162.0	163.7	+ 1.0
(Number of all deaths)	(1733)	(1829)	(1908)	(2236)	(2214)	(2314)	+ 4.5

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988 period.

[3] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-15

MORTALITY RATES[1] AMONG YOUNG ADULTS (20-44 years) BY GENDER IN URBAN AND RURAL AREAS,[2] ARIZONA, 1983 - 1988

Area/Gender	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Male	178.5	199.2	197.8	217.9	207.4	215.2	+3.8
Female	94.1	84.2	78.2	96.7	83.3	86.1	+3.4
Total	136.6	142.2	138.6	158.1	146.3	151.7	+3.7
RURAL							
Male	298.8	278.4	295.6	299.0	317.2	301.5	-4.9
Female	97.4	105.9	110.9	123.6	124.0	117.6	-5.2
Total	199.0	192.8	202.4	210.4	219.5	208.3	-5.1
STATEWIDE							
Male	205.3	216.2	219.0	235.1	230.5	233.1	+1.1
Female	94.9	88.9	85.5	102.6	92.2	92.9	+0.8
Total	150.5	153.2	152.7	169.4	162.0	163.7	+1.0

[1] Rates are presented per 100,000 population.

[2] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Mortality of Middle-Aged Adults

The 614,486 middle-aged adult residents aged 45 to 64 experienced 4,865 deaths or 13 deaths per average day in 1988 for a mortality rate of 791.7 per 100,000, the lowest of the decade (Table 3-16). The survival of middle-aged adults in 1988 had improved by 7 percent relative to 1983 and by 14 percent relative to 1980. One in 109 middle-aged adults died in 1980, one in 118 in 1983 and one in 126 in 1988.

A major contributor to the improved survival of middle-aged adults was the 20 percent reduction in the rate of death from heart disease from 1980 to 1988. This decline made the 1988 heart disease death rate the decade's lowest. In contrast, cancer, the leading cause of middle-aged death, posed only a five percent lower mortality risk in 1988 than in 1980. In addition, the 1988 cancer death rate equaled the rate in 1981. In 1980, middle-aged adults were only 2 percent more likely to die from cancer than heart disease.[a] By 1988, cancer was 22 percent more likely than heart disease to cause death.

The 26 percent decline from 1980 to 1988 in death rates from chronic obstructive pulmonary disease (COPD) also contributed to better survival during middle age. The 1988 death rate for COPD was the decade's lowest. In contrast, 1988 death rates for unintentional injuries and alcoholism were neither the highest nor lowest of the decade.

Unintentional injuries claimed middle-aged lives at almost an identical rate in 1988 as in 1983. The 1988 death rates for motor vehicle-related unintentional injuries and non-vehicular-related injuries indicated little sustained progress in preventing these deaths. Both rates exceeded rates in the years between 1983 and 1988. A similar temporal relation was seen between the 1988 alcoholism death rate and earlier annual rates.

Gender Differences. Improved survival from 1980 or 1983 to 1988 occurred for both males and females (Table 3-16), although year-by-year changes were often irregular. Heart disease caused death at a 23 percent lower rate for men and a 18 percent lower rate for women in 1988 compared to 1980. Females also had a 36 percent reduction from 1980 to 1988 in their death rate from cerebrovascular diseases or stroke. Risk factors like hypertension, obesity and high cholesterol are shared by both diseases. For males, alcoholism rather than stroke was among the five leading causes of death in 1988.

Unlike heart disease, cancer was no less a threat to middle-aged male lives in 1988 than in either 1983 or 1980, while some (9 percent) improvement did occur in female cancer death rates over this period. The temporal trends in the mortality risk of COPD also were discordant for the two genders. The 1988 female death rate for COPD exceeded the 1983 rate by 14 percent and the 1980 rate by 30 percent. Indeed, it was the second highest rate of the decade. The 1988 male death rate for COPD was, in contrast, the decade's lowest, 21 and 46 percent lower than the 1983 and 1980 rates respectively.

The 1988 death rate for unintentional injuries for both genders was virtually identical to the corresponding 1983 rate. Motor vehicles fatally injured men at a 14 percent higher rate in 1988 than in 1983, while the 1988 rate for women was 4 percent lower. Other unintentional injuries, e.g. falls, fires and poisonings, posed a greater mortality risk to both men and women in 1988 than they did in four of the five preceding years.

[a] The heart disease and cancer death rates were 280.5 and 284.8 per 100,000 respectively in 1980 and 223.4 and 271.9 per 100,000 respectively in 1988.

The declining trend since 1985 in the male alcoholism death rate halted in 1988 with the rate returning to the 1983 level. During this decade, at least 100 middle-aged men have died annually from diseases that are a consequence of abusing alcohol. Almost three-quarters of the deaths from alcoholism in 1988 were to men.

Regional Differences. The improved survival chances of middle-aged adults from either 1980 or 1983 to 1988 was confined to urban adults (Table 3-17). The 1988 risk of death for rural adults was no better than their 1983 risk and 3 percent worse than their 1980 risk. Urban adults' chances of dying in 1988 were 9 percent less than in 1983 and 19 percent less than in 1980. If the mortality risk of rural adults had fallen from 1980 to 1988 like the risk of urban adults did, 286 rural adults would not have died in 1988.

Contrary to the continual temporal decline in heart disease mortality seen in both the nation and the state for the past two decades, rural adult Arizonans had almost the same risk of dying from heart disease in 1988 as they did in 1980.[b] In stark contrast, urban adults had a 26 percent reduction in the risk of a heart disease death from 1980 to 1988, with the 1988 rate the decade's lowest. In 1980, the mortality risk of heart disease was almost equal for adults in the two regions. Since little progress was made in preventing premature death from heart disease among rural adults, in 1988 rural compared to urban adults had a 36 percent greater risk of dying from heart disease.

Not only did heart disease mortality not decrease but also the risk of dying from cancer increased 18 percent for rural adults from 1980 to 1988. Again, an opposite and favorable trend in cancer mortality risk occurred for urban adults, with a 10 percent reduction to the decade's lowest rate. Rural compared to urban adults went from being 22 percent less likely to die from cancer in 1980 to 2 percent more likely to die from cancer in 1988. If urban adults had the same risk of dying from heart disease or cancer as did rural adults in 1988, one more urban adult would have died each day.

The temporal trend in unintentional injury mortality for rural adults also was unfavorable, with the 1988 rate the highest of the past six years and only 5 percent lower than the 1980 rate. Both injuries inflicted by motor vehicles or incurred in other events killed rural residents in 1988 at the highest six-year rates. In contrast, the 1988 unintentional injury mortality rate for urban adults was the second lowest of the past six years. However, the 1988 other injury fatality rate for urban adults was the six-year highest.

COPD and alcoholism exacted a 41 and 16 percent greater mortality toll respectively on rural adults in 1988 than 1983. The opposite occurred for urban adults, with reductions in risk of at least 18 percent in both causes. Moreover, the 1988 COPD death rate for urban adults was the decade's lowest.[c] The rural mortality advantage regarding death from COPD in 1983 changed into a constant disadvantage since 1986, while the rural disadvantage regarding death from alcoholism grew. In 1988, rural compared to urban adults were 28 and 99 percent more likely to die from COPD and alcoholism respectively.

The mortality risk overall and for each leading cause of death did not improve for rural middle-aged adults but did improve for urban adults. Rural adult males were more disadvantaged than their female peers since their 1988 mortality rate was not only the

[b] The rural middle-aged adult mortality rate for heart disease was 283.6/100,000 in 1980 and 280.4/100,000 in 1988.

[c] The COPD death rate for urban adults was 51.8/100,000 in 1980 and 34.7/100,000 in 1988.

highest of the past six years but also of the decade[d] (Table 3-18). Relative to 1983, the 1988 mortality rate of rural females was unchanged. Contrastingly, urban male and female mortality rates in 1988 were the lowest of the decade.[e]

Opposite temporal trends in mortality by region meant that the elevation in mortality risk of rural relative to urban males and females was widening through time. Using urban females, the most advantaged subgroup, as the base, in 1983 for every death per 100,000 urban females, 1.1 deaths per 100,000 rural females, 1.7 deaths per 100,000 urban males and 2.1 deaths per 100,000 rural males occurred. The respective ratio of risk for 1988 was 1.0 to 1.2 to 1.6 to 2.3 deaths per 100,000. The elevation in risk of rural relative to urban males increased from 1.2 in 1983 to 1.4 in 1988.

[d] The rural adult male mortality rate was 1281.1/100,000 in 1980 and 1284.1/100,000 in 1988.

[e] The urban adult mortality rates per 100,000 males and per 100,000 females were 1193.1 and 666.0 respectively in 1980 and 930.1 and 562.0 respectively in 1988.

TABLE 3-16

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 years) BY GENDER, ARIZONA, 1983 - 1988

GENDER/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
MALE							
Diseases of heart	406.7	401.2	375.5	342.6	358.4	334.4	- 3.9
Malignant neoplasms	295.7	296.2	302.8	312.0	308.9	307.7	- 0.4
Chronic obstructive pulmonary disease	50.6	52.9	46.7	50.2	47.8	40.0	- 16.3
Unintentional injuries	60.0	55.2	53.0	53.4	52.3	59.0	+ 12.8
Motor vehicle-related	26.3	31.8	31.5	31.0	30.5	30.0	- 1.6
Other than motor vehicle	33.7	23.4	21.5	22.4	21.8	29.0	+ 33.0
Alcoholism	41.2	44.4	43.8	39.5	35.3	41.3	+ 17.0
All causes	1094.6	1117.0	1081.9	1040.3	1058.2	1010.8	- 4.5
(Number of all deaths)	(2791)	(2915)	(2916)	(2921)	(3056)	(3032)	- 0.8
FEMALE							
Malignant neoplasms	256.7	260.5	272.6	250.7	260.2	237.8	- 8.6
Diseases of heart	136.6	140.1	122.8	111.8	119.6	117.6	- 1.7
Chronic obstructive pulmonary disease	29.8	26.1	35.7	29.1	32.1	34.0	+ 5.9
Cerebrovascular diseases	28.3	28.9	25.4	29.1	22.9	23.9	+ 4.4
Unintentional injuries	23.7	20.5	21.9	16.4	27.9	23.5	- 15.8
Motor vehicle-related	12.9	14.5	11.3	10.4	15.7	12.4	- 21.0
Other than motor vehicle	10.8	6.0	10.6	6.0	12.2	11.1	- 9.0
All causes	625.6	643.8	638.5	592.7	621.7	582.8	- 6.3
(Number of all deaths)	(1745)	(1824)	(1862)	(1771)	(1897)	(1833)	- 3.4
TOTAL							
Malignant neoplasms	275.3	277.6	287.1	280.4	283.9	271.9	- 4.2
Diseases of heart	265.6	265.3	244.1	223.6	235.7	223.4	- 5.2
Chronic obstructive pulmonary disease	39.7	39.0	41.0	39.3	39.7	36.9	- 7.1
Unintentional injuries	41.0	37.1	36.7	34.4	39.7	40.9	+ 3.0
Motor vehicle-related	19.3	22.8	20.8	20.4	22.9	21.0	- 8.3
Other than motor vehicle	21.7	14.3	15.9	14.0	16.8	19.7	+ 17.3
Alcoholism	29.4	31.8	30.5	25.4	25.1	27.5	+ 9.6
All causes	849.6	870.7	851.5	809.5	833.9	791.7	- 5.1
(Number of all deaths)	(4536)	4730)	(4778)	(4692)	(4953)	(4865)	- 1.8

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[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988 period.

TABLE 3-17

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 years) BY URBAN AND RURAL AREAS,[3] ARIZONA, 1983 - 1988

AREA/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Malignant neoplasms	281.5	273.7	290.5	275.5	282.4	270.5	- 4.2
Diseases of heart	248.8	251.9	240.9	216.8	223.6	206.4	- 7.7
Chronic obstructive pulmonary disease	42.4	38.8	43.4	37.9	35.4	34.7	- 2.0
Unintentional injuries	20.3	33.1	29.8	28.2	36.0	31.3	-13.1
Motor vehicle-related	15.3	21.0	17.4	17.1	21.1	16.1	-23.7
Other than motor vehicle	5.0	12.1	12.4	11.1	14.9	15.2	+ 2.0
Alcoholism	27.7	30.9	29.8	22.3	23.9	22.4	- 6.3
All causes	815.9	836.9	835.0	776.9	793.4	742.2	- 6.5
(Number of all deaths)	(3296)	(3468)	(3556)	(3443)	(3613)	(3510)	- 2.9
RURAL							
Diseases of heart	317.9	307.9	254.3	245.5	275.6	280.4	+ 1.7
Malignant neoplasms	256.8	290.2	276.5	296.1	288.6	276.9	- 4.1
Unintentional injuries	66.1	50.1	58.4	54.2	52.0	72.8	+40.0
Motor vehicle-related	31.5	28.5	31.8	30.8	28.9	37.4	+29.4
Other than motor vehicle	34.6	21.6	26.6	23.5	23.1	35.3	+52.8
Chronic obstructive pulmonary disease	31.6	39.3	33.3	44.0	54.1	44.5	-17.7
Alcoholism	38.2	38.5	25.9	35.2	28.9	44.5	+54.0
All causes	954.5	978.4	903.3	915.5	966.9	957.0	- 1.0
(Number of all deaths)	(1240)	(1271)	(1222)	(1249)	(1340)	(1355)	+ 1.1
STATEWIDE							
Malignant neoplasms	275.3	277.6	287.1	280.4	283.9	271.9	- 4.2
Diseases of heart	265.6	265.3	244.1	223.6	235.7	223.4	- 5.2
Chronic obstructive pulmonary disease	39.7	39.0	41.0	39.3	39.7	36.9	- 7.1
Unintentional injuries	41.0	37.1	36.7	34.4	39.7	40.9	+ 3.0
Motor vehicle-related	19.3	22.8	20.8	20.4	22.9	21.0	- 8.3
Other than motor vehicle	21.7	14.3	15.9	14.0	16.8	19.7	+17.3
Alcoholism	29.2	31.8	28.9	25.4	25.1	27.5	+ 9.6
All causes	849.6	870.7	851.5	809.5	833.9	791.7	- 5.1
(Number of all deaths)	(4536)	(4739)	(4778)	(4692)	(4953)	(4865)	- 1.8

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988 period.

[3] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-18

MORTALITY RATES[1] AMONG MIDDLE-AGED ADULTS (45-64 years) BY GENDER IN URBAN AND RURAL AREAS,[2] ARIZONA, 1983 - 1988

AREA/GENDER	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Male	1036.9	1070.6	1062.3	997.1	999.5	930.1	-6.9
Female	615.1	622.5	625.1	582.5	597.6	562.0	-6.0
Total	815.9	836.9	835.0	776.9	793.4	742.2	-6.5
RURAL							
Male	1271.7	1264.0	1143.5	1227.0	1253.0	1284.1	+2.5
Female	658.9	712.3	680.8	625.7	700.1	651.5	-6.9
Total	954.5	978.4	903.3	915.5	966.9	957.0	-1.0
STATEWIDE							
Male	1094.6	1117.0	1081.9	1040.3	1058.2	1010.8	-4.5
Female	625.6	643.8	638.5	592.7	621.7	582.8	-6.3
Total	849.6	870.7	851.5	809.5	833.9	791.7	-5.1

[1] Rates are presented per 100,000 population.

[2] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Elderly Mortality

In 1988, 52 elderly residents at least 65 years old died on an average day. The 19,083 deaths among the 438,538 senior citizens translated into a 1988 mortality rate of 4351.5 per 100,000, a one percent higher rate than in 1983 (Table 3-19). During the past seven years, total mortality rates for the elderly annually varied by less than two percent. For this reason, elderly survival chances seemed on a relatively stable plateau since 1981. Annual increases in the number of elderly deaths were counterbalanced by increases of similar magnitude in the elderly population. One in every 23 elderly died in 1988.

Heart disease and cerebrovascular disease or stroke claimed the lives of senior citizens at the decade's lowest rates in 1988 after reductions from 1980 of 9 and 22 percent respectively. In 1980, 49 percent of elderly deaths were due to these two causes compared to 44 percent in 1988. On an average day in 1988, 23 senior citizens died from heart disease or stroke.

Cancer posed a 5 percent greater mortality risk to the elderly in 1988 than 1983, with the 1988 rate the second highest in the decade. Chronic obstructive pulmonary disease (COPD) and pneumonia/influenza also were greater threats to elderly survival in 1988 than in 1983. The 45 percent increase in the death rate for pneumonia/influenza from 1983 to 1988 made the 1988 mortality rate the decade's highest.[a] Pneumonia/influenza accounted for proportionally more elderly deaths in 1988 than in 1980 (4.6 and 3.2 percent respectively).

Gender Differences. The survival chances of elderly females were at the worst level of the decade in 1988,[b] while male survival chances were 3 percent better in 1988 than in 1980. This difference in trend from 1980 to 1988 between males and females was due to a) a smaller decline in heart disease mortality for females than males (5 and 12 percent respectively); and b) larger increases in mortality from cancer, COPD and pneumonia and influenza for females (12, 44 and 22 percent respectively) than for males (9, 8 and 10 percent respectively). Because of these differential changes, the male to female ratios in mortality rates narrowed for heart disease, cancer, COPD and pneumonia and influenza. In 1983, the rate ratios for these four causes ranged from a low of 1.43 to a high of 2.47. The range was from 1.20 to 1.96 in 1988.

Mortality rates for stroke declined 21 percent from 1980 to 1988 for both males and females. Since 1986, females have been at greater risk of death from stroke than have males. Females had a 6 percent greater risk than males of dying from a stroke in 1988.

Regional Differences. The mortality risk of the elderly appeared relatively stable during the past six years because that was the temporal pattern displayed by the urban elderly, the predominant regional group (Table 3-20). However, the survival chances of the rural elderly were 4 percent worse in 1988 than in 1983, with the 1988 mortality rate the highest of the past six years. The 1988 mortality risk of the rural elderly equaled the risk of the urban elderly rather than being lower as it was in prior years.

Elderly in the two regions differed from 1983 to 1988 in mortality risk largely because of trends of different magnitude in heart disease mortality. The 1988 heart disease death rate for the rural elderly, the second highest of the past six years, was only 3 percent lower the 1983 rate. In contrast, the 1983-88 reduction in heart disease mortality was twice as great for the urban elderly. Rural compared to urban elderly had a lower annual risk of dying from heart disease from 1980 to 1987; in 1988 the risk was the same for the two groups.

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[a] The elderly death rate for pneumonia/influenza was 173.7/100,000 in 1980 and 200.2/100,000 in 1988.

[b] The death rate for elderly females was 3600.0/100,000 in 1980 and 3654.6/100,000 in 1988.

The cancer death rate increased for the third consecutive year among the urban elderly, making the 1988 rate the decade's highest rate, 9 percent higher than the 1980 rate. Cancer mortality increased less regularly for the rural elderly but the 1988 rate was 10 percent greater than the 1980 rate. In 1988, the rural elderly had a lower mortality risk from cancer than urban elderly, similar to the years prior to 1986.

From 1980 to 1988, the stroke mortality rate declined at least 21 percent for both the urban and rural elderly. The two regional groups also showed identical changes from 1980 to 1988 in mortality rates for COPD, with increases of 5 percent. In all years of the decade, stroke and COPD posed a greater mortality risk to urban than rural elderly.

Pneumonia and influenza exacted at least a 44 percent greater mortality toll on both urban and rural elderly in 1988 than in 1983. However, the 1988 death rate for pneumonia and influenza was the decade's highest for the urban elderly[c] but not the rural elderly. Nearly 900 elderly died from pneumonia and influenza in 1988 compared to less than 500 elderly deaths from this cause in 1983.

Urban males were the only regional elderly subgroup with a lower mortality rate in 1988 than in 1983 (Table 3-21). Compared to 1983, the 1988 mortality rate was 3, 4 and 5 percent greater for urban females, rural females and rural males respectively. From 1980 to 1987, rural males annually were at least 5 percent less likely to die than urban males. In 1988, that advantage of rural males disappeared and they now had the highest mortality rate among the subgroups in Table 3-21. Rural elderly females maintained their position as the most advantaged subgroup, followed closely by urban females.

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[c] The urban elderly death rate for pneumonia and influenza was 162.9/100,000 in 1980 and 200.6/100,000 in 1988.

TABLE 3-19

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ELDERLY (65 years and older) BY GENDER, ARIZONA, 1983 - 1988

GENDER/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
MALE							
Diseases of heart	2059.3	2017.3	1937.6	1946.0	1992.4	1928.0	- 3.2
Malignant neoplasms	1224.7	1256.2	1237.0	1236.6	1292.1	1289.1	- 0.2
Chronic obstructive pulmonary disease	379.4	403.6	392.4	418.7	383.4	384.6	+ 0.3
Cerebrovascular disease	358.0	368.7	346.7	302.2	299.8	292.2	- 2.5
Pneumonia and influenza	169.9	218.0	212.2	212.8	212.2	221.7	+ 4.5
All causes	5293.0	5369.9	5222.4	5197.1	5297.5	5284.3	- 0.2
(Number of all deaths)	(8166)	(8622)	(8811)	(9011)	(9561)	(9897)	+ 3.5
FEMALE							
Diseases of heart	1439.0	1389.6	1413.5	1384.0	1348.1	1398.8	+ 3.8
Malignant neoplasms	694.4	713.2	725.2	751.3	741.9	741.2	- 0.1
Cerebrovascular disease	365.0	357.1	321.6	306.8	320.9	309.9	- 3.4
Chronic obstructive pulmonary disease	153.6	180.2	178.8	200.0	197.9	196.5	- 0.7
Pneumonia and influenza	113.0	143.4	146.8	165.2	155.0	184.2	+18.8
All causes	3535.7	3584.7	3564.0	3596.8	3653.1	3654.6	0.0
(Number of all deaths)	(7042)	(7499)	(7912)	(8254)	(8789)	(9186)	+ 4.5
TOTAL							
Diseases of heart	1709.2	1662.2	1639.8	1625.9	1644.8	1624.7	- 1.2
Malignant neoplasms	925.5	949.0	946.2	960.1	977.7	975.1	- 0.3
Cerebrovascular diseases	361.2	362.1	332.5	304.8	311.8	302.4	- 3.0
Chronic obstructive pulmonary disease	252.1	277.2	271.0	294.1	277.4	276.8	- 0.2
Pneumonia and influenza	137.8	175.8	175.1	185.7	179.5	200.2	+11.5
All causes	4302.8	4359.9	4280.1	4285.6	4357.9	4351.5	- 0.1
(Number of all deaths)	(15208)	(16121)	(16723)	(17265)	(18350)	(19083)	+ 4.1

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988 period.

TABLE 3-20

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ELDERLY (65 years and older) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1983 - 1988

AREA/CAUSE	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Diseases of heart	1721.7	1706.7	1652.9	1667.1	1695.8	1624.8	- 4.2
Malignant neoplasms	947.6	975.2	945.4	958.8	969.2	988.0	+ 1.9
Cerebrovascular disease	382.6	369.8	333.4	310.7	318.6	307.9	- 3.4
Chronic obstructive pulmonary disease	256.6	294.4	273.8	295.0	281.3	287.7	+ 2.3
Pneumonia and influenza	139.0	188.5	184.5	191.1	183.4	200.6	+ 9.4
All causes	4347.4	4461.0	4290.7	4330.3	4390.4	4358.2	- 0.7
(Number of all deaths)	(11759)	(12593)	(12816)	(13255)	(14030)	(14495)	+ 3.3
RURAL							
Diseases of heart	1670.6	1518.4	1580.3	1495.3	1484.5	1624.4	+ 9.4
Malignant neoplasms	848.6	864.4	938.5	964.2	1004.8	934.4	- 7.0
Cerebrovascular disease	298.6	337.3	325.7	286.3	290.6	285.1	- 1.9
Chronic obstructive pulmonary disease	237.5	221.8	259.1	291.4	265.0	242.6	- 8.5
Pneumonia and influenza	132.6	134.9	143.0	168.4	167.5	199.2	+18.9
All causes	4157.3	4033.8	4200.3	4144.0	4225.5	4330.5	+ 2.5
(Number of all deaths)	(3449)	(3528)	(3907)	(4010)	(4320)	(4588)	+ 6.2
STATEWIDE							
Diseases of heart	1709.2	1662.2	1639.8	1625.9	1644.8	1624.7	- 1.2
Malignant neoplasms	925.5	949.0	946.2	960.1	977.7	975.1	- 0.3
Cerebrovascular disease	361.2	362.1	332.5	304.8	311.8	302.4	- 3.0
Chronic obstructive pulmonary disease	252.1	277.2	271.0	294.1	277.4	276.8	- 0.2
Pneumonia and influenza	137.8	175.8	175.1	185.7	179.5	200.2	+11.5
All Causes	4302.8	4359.9	4280.1	4285.6	4357.9	4351.5	- 0.1
(Number of all deaths)	(15208)	(16121)	(16723)	(17265)	(18350)	(19083)	+ 4.0

[1] Rates are presented per 100,000 population.

[2] The five causes with the greatest number of deaths over 1983-1988 period.

[3] Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-21

MORTALITY RATES[1] AMONG ELDERLY (65 years and older) BY GENDER IN URBAN AND RURAL AREAS,[2] ARIZONA, 1983-1988

AREA/GENDER	1983	1984	1985	1986	1987	1988	Percent Change From 1987
URBAN							
Male	5382.6	5528.6	5285.3	5261.7	5397.6	5281.8	-2.1
Female	3582.8	3678.2	3592.5	3655.5	3664.1	3695.6	+0.9
Total	4347.4	4461.0	4290.7	4330.3	4390.4	4358.2	-0.7
RURAL							
Male	5029.0	4909.2	5040.9	5011.6	5009.9	5302.9	+5.8
Female	3370.0	3256.0	3464.8	3396.7	3615.6	3517.1	-2.7
Total	4157.3	4033.8	4200.3	4144.0	4255.5	4330.5	+1.8
STATEWIDE							
Male	5293.0	5369.9	5222.4	5197.1	5297.5	5287.3	-0.2
Female	3535.7	3584.7	3564.0	3596.8	3653.1	3654.6	0.0
Total	4302.8	4359.9	4280.1	4285.6	4357.9	4351.5	-0.1

[1] Rates are presented per 100,000 population.

[2] Maricopa and Pima counties comprise Arizona's urban areas while the remaining counties represent its rural areas.

SPECIAL SECTION
VICTIMS OF MOTOR VEHICLE ACCIDENTS AND THEIR INJURIES

In 1983, Arizona had the 16th highest motor vehicle accident death rate among the 50 states.[1] By 1987, Arizona had deteriorated to the seventh worst state in rate of mortality from unintentional injuries related to motor vehicles.[2] Injuries as a result of motor vehicle events have killed Arizonans at annual rates exceeding the national rates for more than a decade, a consistent health status disadvantage for Arizonans. Greater disadvantage was consistently noted among younger Arizonans and rural Arizonans.

From 1983 to 1988, excessive annual death rates meant that almost 1,300 Arizonans died who would not have died if they had the same mortality odds as their U.S. counterparts. Or, relative to the U.S. rate, four excess motor vehicle fatalities occurred during an average week in Arizona from 1983 to 1988.

This section had several purposes. The first was to diagram the array of outcomes from vehicular events involving an injury and to indicate what outcomes have descriptive data available. The second was to more fully describe the fatalities from 1983 to 1988. Specifically, who were the victims of these fatal vehicular accidents, e.g. drivers, occupants or pedestrians, and what were some of their demographic characteristics.

The third purpose was to explore injury morbidity in order to demonstrate the larger magnitude of the motor vehicle injury problem. This exploration involved a description of the health care costs, actual injuries and consequences suffered by victims of vehicular events who were treated as inpatients in one large Arizona metropolitan acute-care hospital with a trauma center during the first six months of 1989. The inclusion, as of January 1989, of International Classification of Diseases codes describing external causes of injury (E-codes) in the Hospital Charges Reporting System mandated by A.R.S. 36-125.06A made this exploratory study possible.

Outcomes of Motor Vehicle Accidents

Figure 1 diagrams the possible outcomes to people injured in an event involving an automobile, truck, bus or other motor vehicle. Death certificates describe fatal outcomes (row F in diagram) to Arizona residents irrespective of where they occur. Death at the scene of the motor vehicle accident (F1) or during transit to hospital (F2) is not identified on the death certificate. Place of death is more likely to be specified if the fatal outcome occurs within the framework of institutionalized health care, i.e., in emergency treatment (F3) or after admission to either a hospital (F4) or other health care facility (F5). However, nearly one-half of death certificates give place of death as "other". Also, injury death coding gives precedence to the external cause (E-code), e.g. driver of motor vehicle, vehicular collision with pedestrian, rather than part of body harmed, so death certificate data on type of bodily trauma are limited.

Injured persons still alive at the scene of a vehicular event may require transport for health care attention (box E1) or may walk away because the injury is correctly or incorrectly perceived as minor (box C1). Emergency transport services maintain records on their clients but these data are not compiled or centralized for all contacts either in a specified area or statewide. Thus, data are not available for either the number of injured persons treated by and released from emergency care (box E2) or the earlier injured walkaways who recycle for care from a private physician (box D1) or emergency room.

Data on injuries again become available when people are admitted to inpatient care (box E3), with information on external cause of injury, type of bodily trauma and cost of care. Starting from the pool of inpatients injured in a motor vehicle event, the proportion who die (box F4), are discharged to home or self care (box C4), or are discharged to another care facility (box E4) can be described. This progression of outcomes and the costs of inpatient treatment for injured persons are key issues for the exploratory study. Data on chronic impairment (row B), staying in good health (row A) and recycling into the health care system for late effects of the original motor vehicle accident are not available after persons are discharged from the hospital to other health care institutions (box E4) or to home/self care (box C4).

Persons Who Were Motor Vehicle Fatalities

Ninety-seven percent of the 5,124 people at least one year of age[a] fatally injured in a motor vehicle event from 1983 through 1988 were victims of traffic accidents, with type of victim known for 4,988.[b] Non-driving occupants of motor vehicles except motorcycles was the most prevalent type of victim at 39 percent, followed by drivers of motor vehicles at 30 percent, pedestrians at 20 percent and riders (i.e., both drivers and passengers) of motorcycles at 11 percent (Table 4-1).

Males accounted for 2.4 times more motor vehicle fatalities than did females (71 and 29 percent respectively). This male to female ratio held for driver and pedestrian deaths, fell to a ratio of 1.8:1 for occupant deaths and rose to a ratio of 8.9:1 for motorcycle rider deaths (Table 4-1). The disproportionality of males relative to females was more than threefold among young adult (20-44 years) fatalities but less than twofold among child and adolescent (1-19 years) and older adult (45 years and older) fatalities.

Among every 100 fatalities, 51 were young adults, 28 were older adults and 21 were children and adolescents. In other words, 72 percent of people fatally injured in a motor vehicle accident had not reached their 45th birthday. Young adults accounted for the majority of deaths to drivers (56 percent) and motorcycle riders (76 percent), but not deaths to occupants (49 percent) and pedestrians (38 percent). In fact, being a pedestrian (compared to a driver, occupant or motorcycle rider) was the least likely way in which a young adult was fatally injured by a motor vehicle (15 percent). In contrast, 24 percent of children and adolescents and 28 percent of older adults were pedestrians when they were fatally injured in a vehicular collision.

In 1980, the last year with statewide ethnic population counts, the mortality rate for unintentional injuries related to motor vehicles was at least 2.9 times higher for Native Americans than any other ethnic group. Since then, annual mortality rates for this cause have been elevated in counties with significant Native American populations.

Surprisingly, as shown in Table 4-2[c], Native Americans fatally injured by motor vehicles from 1983 to 1988 were almost twice as likely to be pedestrians (31 percent) than drivers (16 percent). Moreover, pedestrian deaths exceeded driver deaths among Native Americans in every age group. In contrast, at least 30 percent of white non-Hispanic and Hispanic fatalities occurred when they were drivers. Pedestrian victims did not exceed driver victims at any age among white non-Hispanic deaths.

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[a] Twenty-four fatalities over the six year period were less than one year old.

[b] Victim status was unknown for 24 deaths, 115 pedalcyclist deaths were excluded and a code of other specified or unspecified person in vehicle was assigned to occupant.

[c] Ethnicity was unknown for 27 deaths and 120 Black deaths (2.4 percent) were excluded.

Native Americans, comprising 7 percent of the state's population, accounted for 27 percent of fatally injured pedestrians but only 3 percent of fatally injured motorcycle riders. Motorcycle fatalities were overwhelmingly (86 percent) an white non-Hispanic phenomenon, while pedestrian and occupant fatalities were underrepresented among white non-Hispanics (55 and 63 percent respectively). The ethnic distribution of driver fatalities approximated the ethnic groups' representation in the population.

Almost one-third of fatally injured white non-Hispanics were older than 44 years compared to only 20 percent of Hispanics and 17 percent of Native Americans. The age disadvantage at death from vehicular injury of both ethnic minorities primarily stemmed from pedestrian deaths. Despite a population ratio of 3.1 Native Americans and Hispanics for every 10 white non-Hispanics, ethnic minorities almost equaled white non-Hispanics in the absolute number of child/adolescent and young adult pedestrian deaths.

Exploratory Study: Injured Persons Admitted to Inpatient Hospital Care

From January 1 to June 30, 1989, 355 persons were admitted as inpatients because of vehicle-related injuries (E codes = 810-825) to the one trauma-center hospital selected from the Hospital Reporting System. (The system covers 46 non-federal, non-Indian Health Service hospitals of at least 50 beds, 7 of which are trauma centers.) The distribution of these inpatients by type of victim differed considerably from the victim distribution of fatalities. Drivers were most prevalent at 39 percent, followed by occupants at 37 percent, riders of motorcycles at 14 percent, pedestrians at 8 percent and pedalcyclists at 3 percent.

Eight injury patients died during their inpatient hospital stay for a case-fatality rate of 2.3 percent. Pedestrians' case-fatality rate was highest (7.1 percent), followed by motorcycle riders (4.2 percent), occupants (1.5 percent) and drivers (1.5 percent). No injured pedalcyclists died. Total hospital charges accrued by these eight persons before death were $117,248, for an average hospital cost per fatal injury inpatient of $14,656.

The total hospital bill for the 347 injured inpatients who survived until discharge was almost 2.2 million dollars, for a more than $6,000 average hospital charge per injury inpatient survivor. Injury inpatient survivors stayed in hospital a median of 2.1 days, with hospital stays ranging from 1 to 60 days. One in five survivors required more than a week of inpatient treatment before discharge.

Average lengths of stay in the hospital and average hospital charges varied by the four major victim types (Table 4-3). Pedestrians had both the highest median stay (2.7 days; range = 1-42 days) and mean hospital charges, with their average bill of $7,800 at least $1,200 higher than the average bill for the other types of victims. Pedalcyclists had both the shortest median stay (1.5 days; range = 1-6 days) and average bill ($3,330). Hospital stays ranged from 1 to 60 days for occupants, 1 to 51 days for motorcycle riders and 1 to 38 days for drivers.

Twenty-eight percent of the persons admitted to inpatient treatment who survived until discharge were children and adolescents (Table 4-4). Young adults, comprising almost a majority of inpatient survivors, had the highest average hospital bill ($7,737), followed by an average bill of $6,853 for the elderly (65 years and older), $5,069 for adults between 45 and 64 years of age and $4,261 for children and adolescents. Young adult inpatient survivors had the highest age-specific average hospital bill in every victim category.

As indicated earlier, a major advantage of hospital records is the information given about specific bodily trauma and discharge from hospital to other care facilities, referred to as aftercare. Aftercare includes short term care, skilled nursing home care, intermediate care and rehabilitative or psychiatric care. About one in eight (12 percent) injured inpatients required aftercare, the added costs of which are unknown.

The specific bodily trauma of each injured inpatient was equivalent to his/her principal diagnosis as stated in ICD codes. Six ICD diagnostic categories captured 70 percent of the inpatient cases, 100 percent of the fatalities and 90 percent of the cases requiring aftercare. From highest to lowest frequency, these categories were intracranial injury, excluding skull fracture (23 percent); fracture of neck and trunk (13 percent); fracture of lower limb (12 percent); fracture of skull (8 percent); fracture of upper limb (8 percent); and internal injury of chest, abdomen and pelvis (6 percent).

Trauma- or injury-specific mean lengths of stay, mean inpatient hospital costs and probabilities for the three outcomes (death, discharge to aftercare and discharge to home) are presented in Table 4-5. Inpatients whose skull was fractured in the vehicular event had the highest mean hospital costs ($11,398) and were most likely to either die (7 percent) or need aftercare (29 percent). Among persons with skull fracture who survived the scene of the motor vehicle accident, transport to the hospital, emergency room treatment and admission to inpatient care, only 64 percent had the most positive outcome of going home. However, some unknown percent of those discharged home may be disabled or chronically impaired, with parents or spouses becoming the providers of continuing care.

Intracranial injury other than skull fracture and internal injury of chest, abdomen and pelvis had the second and third highest probabilities of death respectively. Although internal injury had a lower probability of death than intracranial trauma (excluding skull fracture), the mean length of hospital stay associated with it was almost twice as long (6.4 and 3.3 days respectively) and the likelihood of extended morbidity, as indexed by aftercare, nearly twice as great (13 and 7 percent respectively).

The probability of mortality was zero, but the probability of morbidity the second and third highest for inpatients with fracture of the lower limb and fracture of the neck and trunk respectively. More than one in five inpatients with either of these fractures were discharged to aftercare. Fracture of the neck and trunk resulted in the longest mean hospital stay and the second highest hospital bill among the diagnostic groups examined.

Two diagnostic groupings, fracture of the upper limb and all other diagnoses, were associated with the shortest mean hospital stays (less than 4 days), least expensive mean hospital bills, zero probability of mortality and the lowest probability (4 percent) of morbidity. In other words, 96 percent of inpatients in either diagnostic group experienced the most favorable outcome of discharge to home. Persons in either injury group represented 37 percent of the six-month admissions to inpatient treatment at the hospital studied after the occurrence of a motor vehicle accident. However, they accounted for only 24 percent of the vehicular-related injury hospital bill.

Among victims of vehicular events who survived long enough to become inpatients, pedestrians clearly had the highest risk (79 percent) to suffer a serious injury, i.e. skull fracture, other intracranial injury, fracture of the lower limb and internal injury of the chest, etc. (Table 4-6). Moreover, pedestrians had a 71 percent higher risk than any other type of victim to have the most serious injury, skull fracture. Traffic accidents were responsible for 96 percent of the skull fracture inpatient cases and at least 94 percent of the cases in any other diagnostic group except fracture of the lower limb.

Motorcycle inpatients had the next highest risk for one of the four serious injuries at 65 percent, followed by drivers at 63 percent, occupants at 59 percent and pedalcyclists at 50 percent. Skull fracture and fracture of the lower limb were more common injuries for motorcycle cases than among all inpatient cases. Injured drivers who became inpatients had the lowest risk for skull fracture but the highest risk for fracture of the neck and trunk and for intracranial injury other than skull fracture among victim groups.

Summary and Discussion

Based on the most recent data from the Arizona Department of Transportation[3], only 4 percent of motor vehicle accidents with injured persons involved pedestrians. We know virtually nothing about those injured pedestrians until they either die with an official record or are admitted as an inpatient to a hospital included in the Hospital Charges Reporting System. Pedestrians comprised 20 percent of vehicular fatalities and 8 percent of the vehicular unintentionally injured inpatients treated at the trauma center hospital used in the exploratory study.

Clearly, pedestrians are overrepresented among vehicular fatalities compared to their representation among motor vehicle accidents (20 and 4 percent respectively). Equally clearly, pedestrians' representation among deaths exceeds their representation among persons who survived the initial vehicular event long enough to be admitted to inpatient treatment (20 and 8 percent respectively).

Once in the hospital, pedestrians had the highest case fatality rate and if they survived until discharge required the longest median hospital stays and consequently incurred the highest mean hospital bill. These consequences stemmed from the fact that pedestrians were more severely traumatized than were other victims. Pedestrian inpatients had the highest rate of skull fracture, the most serious injury in terms of mortality, morbidity (i.e., aftercare), and hospital costs.

What point in the progression of outcomes from a vehicular collision would explain pedestrians' overrepresentation among motor vehicle fatalities relative to their representation among motor vehicle trauma inpatients? One possible point would be the interval between the vehicular occurrence and the time inpatient care is reached. Thus, pedestrians would be overrepresented among deaths at the scene of the motor vehicle accident or during transit to the hospital in the ambulance.

An Ohio incidence study[4] of motor vehicle trauma cases admitted to 41 emergency departments in a geographic area with 2.2 million people found that 4 percent were pedestrians, a proportion identical to the representation of pedestrians among vehicular events in Arizona. This finding appears to cast doubt on the suggestion that pedestrians are overrepresented among deaths relative to treated cases because of higher mortality before treatment is reached, either due to instantaneous death or less-than-timely emergency response. Doubt about this explanation also stems from the fact that pedestrians accounted for 25 percent of the inpatient injury deaths in the exploratory study, a proportion similar to the proportion among all fatalities.

This evidence suggests the following possible explanation for pedestrians' greater contribution to fatalities than to treated inpatient trauma cases. Pedestrians do reach treatment, but the severity of their injuries overwhelms the ability of state-of-the-art trauma center care to save them; hence their greater representation among fatalities. Arizona data are not available on motor vehicle trauma cases treated in emergency rooms. Thus, it is impossible to decide to what extent, singly and/or in combination, the factors of a) instantaneous death; b) delayed emergency response and transport or c) injury severity exceeding the best medical treatment explain the excessive pedestrian deaths. In addition, since different strategies for preventing these excess deaths are implied by these explanatory factors, a decision about how to prevent is not possible.

The elevated risk of Native Americans for vehicular fatalities also appears to stem from issues surrounding the severely traumatized pedestrian. Almost one-third of Native American vehicular deaths are pedestrians at the time of the accident. Most Native Americans live in rural regions of the state where timely response to the event may seem less likely than in urban regions. Therefore, the suggestion that their excess deaths largely are a function of severe injury causing death before inpatient admission may appear more compelling than the explanation that the severity of the injury is so great as to exceed the ability of medical science. Once again, the data to determine the relative explanatory power of these factors are not available. The unavailability problem is compounded in the case of Native American trauma cases because Indian Health Service hospitals are excluded from the inpatient reporting system.

Not only explanation but also description of the injury problem is greatly limited by available data. Limited description is clearly exemplified by the fact that while one-fifth of pedestrian inpatient survivors and 11 percent of inpatient survivors of other victim types require aftercare at discharge from hospital, the length and costs of that care are unknown. In addition, no description is now possible of the proportions of these injured inpatient survivors who are chronically impaired, require further hospitalization, require outpatient health and mental health treatment and rehabilitation, and/or require other health services, e.g. home health or special equipment/supplies.

A Maryland prospective study[5] of 16 to 45 year old inpatient survivors with head trauma (skull fracture and intracranial injury), largely due to a vehicular accident, provided some insight into these other outcomes. It found that in the year after hospital discharge 36 percent were rehospitalized, 94 percent had outpatient medical or surgical treatment, 30 percent had outpatient physical therapy, 14 percent used home health services, and 35 percent used special aids. Moreover, 43 percent indicated that they were still convalescing (i.e., unable to work, go to school or keep house) one year after discharge.

The cost per motor vehicle injured inpatient survivor estimated in the exploratory study included neither costs of the services enumerated above nor the cost of physician services during the initial hospital stay. The estimated cost only captured the hospital bill for the initial hospitalization, a small portion of the lifetime costs accumulated by the victims of vehicular injury, their families, their employers and their insurers.[6-8] Despite the limitation of the Arizona estimate, the cost was nonetheless substantial at an average hospital bill of $6,429 per inpatient survivor and nearly $14,656 per inpatient fatality. Parenthetically, the National Safety Council estimates of medical costs for vehicular injury consider only the initial treatment encounter.[7]

During the six months of the exploratory study, 55 residents of the county where the study hospital was located died in a motor vehicle accident. The study hospital inpatients accounted for 8 of 55 deaths; 7 other death records gave another inpatient hospital as the place of death. However, the circumstances and traumas resulting in 73 percent of the 55 deaths would remain unknown because of deficiencies in available data. Such knowledge would be invaluable in designing strategies to prevent fatalities.

Head trauma was responsible for 88 percent of the inpatient deaths after vehicular injury, but only 31 percent of the vehicular-injured inpatients had either a skull fracture or intracranial injury. Pedestrians and motorcycle riders, comprising 21 percent of the persons admitted to a hospital after a vehicular accident, accounted for 43 percent of the skull fracture cases. Mandated wearing of helmets is a viable strategy to prevent this severe trauma among motorcycle riders. It is not a viable prevention strategy for pedestrians. Indeed, almost all current efforts to prevent motor vehicle-related injuries are directed at drivers and occupants, with pedestrians greatly neglected. Filling in the many gaps in our knowledge about vehicular injury in Arizona not only will permit fuller description of its personal, social and economic impacts but also will provide the foundation to prevent serious injuries to and deaths of pedestrians.

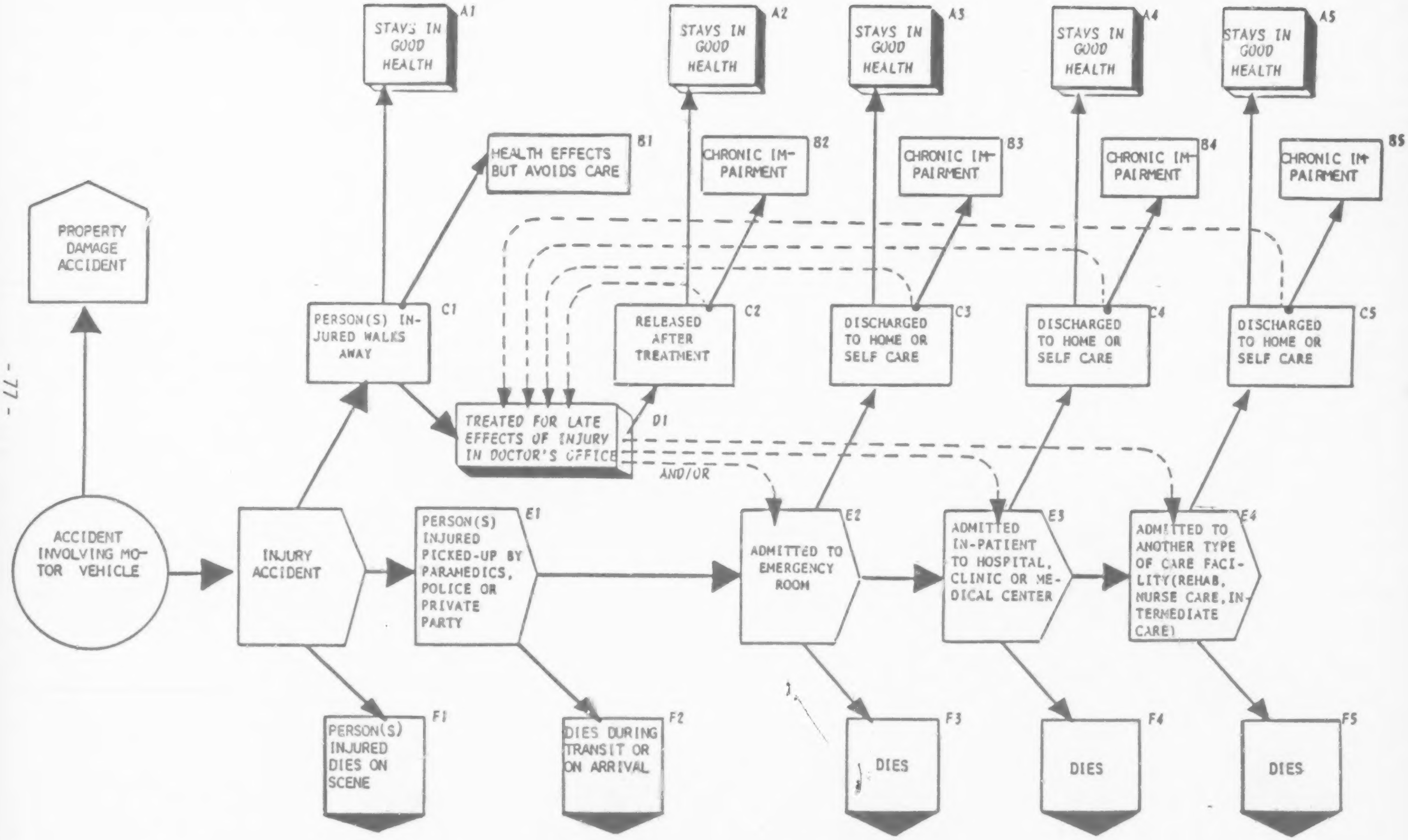
STAYS IN GOOD HEALTH
A1
STAYS IN GOOD HEALTH
A2
STAYS IN GOOD HEALTH
A3
STAYS IN GOOD HEALTH
A4
STAYS IN GOOD HEALTH
A5
HEALTH EFFECTS BUT AVOIDS CARE
B1
CHRONIC IM-PAIRMENT
B2
CHRONIC IM-PAIRMENT
B3
CHRONIC IM-PAIRMENT
B4
CHRONIC IM-PAIRMENT
B5
PROPERTY DAMAGE ACCIDENT
PERSON(S) IN-JURED WALKS AWAY
C1
RELEASED AFTER TREATMENT
C2
DISCHARGED TO HOME OR SELF CARE
C3
DISCHARGED TO HOME OR SELF CARE
C4
DISCHARGED TO HOME OR SELF CARE
C5
TREATED FOR LATE EFFECTS OF INJURY IN DOCTOR'S OFFICE
D1
AND/OR
ACCIDENT INVOLVING MO-TOR VEHICLE
INJURY ACCIDENT
PERSON(S) INJURED PICKED-UP BY PARAMEDICS, POLICE OR PRIVATE PARTY
E1
ADMITTED TO EMERGENCY ROOM
E2
ADMITTED IN-PATIENT TO HOSPITAL, CLINIC OR ME-DICAL CENTER
E3
ADMITTED TO ANOTHER TYPE OF CARE FACI-LITY(REHAB, NURSE CARE, IN-TERMEDIATE CARE)
E4
PERSON(S) INJURED DIES ON SCENE
F1
DIES DURING TRANSIT OR ON ARRIVAL
F2
DIES
F3
DIES
F4
DIES
F5

FIGURE 1. POSSIBLE OUTCOMES OF MOTOR VEHICLE-RELATED INJURIES

TABLE 4-1

PERCENT DISTRIBUTION OF PERSONS FATALLY INJURED BY MOTOR VEHICLES BY GENDER WITHIN AGE GROUPS, 1983-1988

	PERSONS FATALLY INJURED									
Age Group/Gender	M.V.[a] Driver		M.V. Occupant[b]		Motorcycle Rider[c]		Pedestrian		Total	
1-19 Years										
Male	68.6	(140)[d]	62.7	(316)	85.4	(76)	65.7	(161)	66.5	(693)
Female	31.4	(64)	37.3	(188)	14.6	(13)	34.3	(84)	33.5	(349)
20-44 Years										
Male	74.2	(619)	71.6	(678)	90.9	(361)	76.7	(293)	76.2	(1,951)
Female	25.8	(215)	28.4	(269)	9.1	(36)	23.3	(89)	23.8	(609)
45 Years and Older										
Male	68.1	(316)	53.2	(263)	90.0	(36)	72.2	(280)	64.6	(895)
Female	31.9	(148)	46.8	(231)	10.0	(4)	27.8	(108)	35.4	(491)
Total: ≥ 1 Year										
Male	71.6	(1,075)	64.6	(1,257)	89.9	(473)	72.3	(734)	71.0	(3,539)
Female	28.4	(427)	35.4	(688)	10.1	(53)	27.7	(281)	29.0	(1,449)
Grand Total	100.0	(1,502)	100.0	(1,945)	100.0	(526)	100.0	(1,015)	100.0	(4,988)
Row Percent[e]	30.1		39.0		10.5		20.3			

[a] All motor vehicles except motorcycles.
[b] Non-driving passengers of all motor vehicles except motorcycles.
[c] Both drivers and passengers of motorcycles.
[d] Number in parenthesis is the frequency.
[e] Percent may not total 100.0 because of rounding.

TABLE 4-2

PERCENT DISTRIBUTION OF TYPE OF PERSON FATALLY INJURED BY MOTOR VEHICLES FOR EACH ETHNICITY WITHIN AGE GROUPS, 1983-1988

Age Group/Person Type	ETHNIC GROUP							
	White[a]		Hispanic		Native American		Total	
1 - 19 Years								
M.V.[b] Driver	22.9	(140)[c]	18.2	(35)	9.9	(20)	19.4	(195)
M.V. Occupant[d]	46.2	(282)	45.8	(88)	59.4	(120)	48.8	(490)
Motorcycle[e]	11.0	(67)	7.8	(15)	3.0	(6)	8.8	(88)
Pedestrian	20.0	(122)	28.1	(54)	27.7	(56)	23.1	(232)
20 - 44 Years								
M.V. Driver	35.6	(573)	34.8	(136)	20.3	(100)	32.4	(809)
M.V. Occupant	31.5	(507	41.9	(164)	51.3	(253)	37.0	(924)
Motorcycle	21.2	(341)	9.5	(37)	2.2	(11)	15.6	(389)
Pedestrian	11.7	(189)	13.8	(54)	26.2	(129)	14.9	(372)
45 Years and Older								
M.V. Driver	36.4	(384)	34.7	(50)	10.6	(15)	33.5	(449)
M.V. Occupant	38.0	(401)	20.1	(29)	34.5	(49)	35.7	(479)
Motorcycle	3.6	(38)	1.0	(1)	0.0	(0)	2.9	(39)
Pedestrian	22.1	(233)	44.4	(64)	54.9	(78)	27.9	(375)
Total: $\geq$ 1 Year								
M.V. Driver	33.5	(1,097)	30.4	(221)	16.1	(135)	30.0	(1,453)
M.V. Occupant	36.3	(1,190)	38.7	(281)	50.4	(422)	39.1	(1,893)
Motorcycle	13.6	(446)	7.3	(53)	2.0	(17)	10.7	(516)
Pedestrian	16.6	(544)	23.7	(172)	31.4	(263)	20.2	(979)

[a] Excludes whites of Hispanic origin.
[b] All motor vehicles except motorcycles.
[c] Number in parenthesis is number of fatal injuries.
[d] Non-driving passengers of all motor vehicles except motorcycles.
[e] Includes both drivers of and passengers on motorcycles.

TABLE 4-3

PERCENT DISTRIBUTION AND AVERAGE HOSPITAL INPATIENT CHARGES BY LENGTH OF STAY FOR SURVIVING[a] VICTIMS OF MOTOR VEHICLE-RELATED INJURIES, JANUARY 1 - JUNE 30, 1989

		TYPE OF VICTIM			
Stay in Days		Driver[b] (N=135)	Occupant[c] (N=130)	Pedestrian (N=26)	Motorcyclist[d] (N=46)
1	%	32.6	28.5	26.9	19.6
	X̄ Charge $	1,877	1,551	1,863	1,588
2-3	%	32.6	28.5	26.9	45.6
	X̄ Charge $	3,066	2,822	2,227	2,885
4-7	%	16.3	20.0	23.1	19.6
	X̄ Charge $	6,090	5,704	8,108	6,302
8-14	%	11.1	18.5	15.4	13.0
	X̄ Charge $	14,317	13,026	10,824	12,776
15+	%	7.4	4.6	7.7	2.2
	X̄ Charge $	33,390	26,103	41,092	78,698
Total	%	100.0[e]	100.0	100.0	100.0
	X̄ Charge $	6,648	5,995	7,803	6,238

Total Charges[f] = $2,166,733

Total X̄ Charge = 6,429

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[a] Based on survivors at discharge from one hospital located in Pima county.
[b] Driver of all motor vehicles except motorcycles.
[c] Non-driving occupant of all motor vehicles except motorcycles.
[d] Drivers and riders of motorcycles.
[e] Percents may not sum to 100.0 due to rounding.
[f] Excludes $33,304 in total charges for 10 injured pedalcyclists who were hospitalized and survived until discharge.

TABLE 4-4

PERCENT DISTRIBUTION OF TYPES OF SURVIVING INPATIENT VICTIMS BY AGE GROUP AND AGE-SPECIFIC AVERAGE INPATIENT COST[a]

		AGES IN YEARS			
Victim Type[b]		1-19	20-44	45-64	65+
Driver:	%	15.6 (21)[c]	60.0 (81)	18.5 (25)	5.9 (8)
	$\bar{X}$ cost \$	6,669	7,056	5,309	6,651
Occupant:	%	38.6 (49)	38.6 (49)	12.6 (16)	10.2 (13)
	$\bar{X}$ cost \$	3,598	8,178	4,184	5,978
Pedestrian:	%	42.3 (11)	23.1 (6)	11.5 (3)	23.1 (6)
	$\bar{X}$ cost \$	4,292	13,704	6,406	9,016
Motorcyclist:	%	26.1 (12)	65.2 (30)	8.7 (4)	0.0 (0)
	$\bar{X}$ cost \$	2,723	7,661	6,110	-
TOTAL:	%	27.8 (93)	49.7 (166)	14.4 (48)	8.1 (27)
	$\bar{X}$ cost \$	4,261	7,737	5,069	6,853

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[a] Based on data from one hospital for January 1 - June 30, 1989; excludes pedalcyclist surviving inpatients.

[b] Refer to Tables 4-1 through 4-3 for greater explanation of victim types.

[c] Number in parenthesis is the frequency.

TABLE 4-5

AVERAGE LENGTH OF HOSPITAL STAY (ALOS), AVERAGE INPATIENT HOSPITAL COST (AIHC) AND PROBABILITY OF VARIOUS OUTCOMES FOR EACH DIAGNOSTIC GROUP[a]

				OUTCOME PROBABILITIES[b]		
Diagnostic Group	N	ALOS	AIHC	Died	Aftercare	Home
Fracture of Skull (800-804)	28	6.9	$11,398	0.07 (2)[c]	0.29 (8)	0.64 (18)
Fracture of Neck and Trunk (805-809)	45	7.3	$10,132	0.00 (0)	0.22 (10)	0.78 (35)
Fracture of Upper Limb (810-819)	28	3.3	$4,145	0.00 (0)	0.04 (1)	0.96 (27)
Fracture of Lower Limb (820-829)	44	6.9	$7,519	0.00 (0)	0.23 (10)	0.77 (34)
Intracranial Injury, Excluding Skull Fracture (850-854)	82	3.3	$5,819	0.06 (5)	0.07 (6)	0.87 (72)
Internal Injury of Chest, Abdomen, Pelvis (860-869)	23	6.4	$8,032	0.04 (1)	0.13 (3)	0.83 (19)
All Other Diagnoses	105	3.9	$4,127	0.00 (0)	0.04 (4)	0.96 (101)
TOTAL	355	4.9	$6,528	0.02 (8)	0.12 (42)	0.86 (305)

[a] Based on data from one hospital for January 1 - June 30, 1989.
[b] The three probabilities sum to 1.00.
[c] Number in parenthesis is the frequency.

TABLE 4-6

PERCENT DISTRIBUTION OF PRINCIPAL INJURY DIAGNOSIS OVERALL AND FOR EACH VICTIM TYPE[a]

Diagnosis	Total		VICTIM[b] Driver		Occupant		Pedestrian		Motor-cyclist		Pedal-cyclist	
Fracture of Skull	7.9	(28)[c]	4.4	(6)	7.6	(10)	21.4	(6)	12.5	(6)	0.0	(0)
Fracture of Neck and Trunk	12.7	(45)	15.3	(21)	14.4	(19)	7.1	(2)	4.2	(2)	10.0	(1)
Fracture of Upper Limb	7.9	(28)	7.3	(10)	9.1	(12)	7.1	(2)	8.3	(4)	0.0	(0)
Fracture of Lower Limb	12.4	(44)	10.2	(14)	8.3	(11)	25.0	(7)	20.8	(10)	20.0	(2)
Intracranial Injury	23.1	(82)	28.5	(39)	19.7	(26)	25.0	(7)	16.7	(8)	20.0	(2)
Internal Injury of Chest, etc.	6.5	(23)	4.4	(6)	9.1	(12)	0.0	(0)	10.4	(5)	0.0	(0)
All Other Diagnoses	29.6	(105)	29.9	(41)	31.8	(42)	14.3	(4)	27.1	(13)	50.0	(5)
TOTAL	100.0	(355)	100.0	(137)	100.0	(132)	100.0	(28)	100.0	(48)	100.0	(10)

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[a] Based on data for one hospital for January 1 - June 30, 1989.
[b] Refer to Tables 4-1 through 4-3 for greater explanation of victim types.
[c] Number in parenthesis is the frequency.

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MORBIDITY

Data on morbidity, levels of disease and disability in the population, are obtained about the entire Arizona population only for certain communicable or infectious diseases which must be reported by law. The Division of Disease Prevention Services does surveillance and monitoring of these notifiable diseases and provided the data for this chapter. That Division, in particular its Office of Infectious Disease Services, also prepared the subsections of this chapter dealing with sexually transmitted diseases and Human Immunodeficiency Virus (HIV) infection/Acquired Immunodeficiency Syndrome (AIDS).

Non-Sexually Transmitted Diseases

Measles, mumps, pertussis (whooping cough) and rubella (German measles) are prevented by routine schedules of immunization with appropriate vaccines. An epidemic of pertussis occurred in 1988 (Table 5-1). Before 1988, the highest annual incidence rate of pertussis during this decade was 2.3 reported cases per 100,000 population in 1986. The 1988 incidence rate of pertussis was 500 percent greater at 13.7 reported cases per 100,000. In contrast, no case of rubella was reported in 1988, the first year in this decade with zero incidence. The 1988 incidence rates of measles and mumps were 0.1 and 4.1 reported cases per 100,000 respectively.

Almost fifteen more cases of chickenpox per 100,000 were reported in 1988 than in 1987 (incidence rates of 294.8 and 279.9 respectively). The large increase probably stemmed in part from more experience and better compliance with the new reporting requirement, since 1988 was the second year in which individual cases rather than group outbreaks of chickenpox were reported. In addition, the vaccine to prevent chickenpox still is not licensed for routine use.

The vaccine to prevent Haemophilis influenza Type B infection was available for the second year in 1988. Despite this, the incidence rate of Haemophilis influenza type B meningitis rose from 2.5 reported cases per 100,000 in 1987 to 2.9 reported cases per 100,000 in 1988, an increase of 16 percent.

Fewer cases of both aseptic and meningococcal meningitis were reported in 1988 than in each year from 1985 to 1987. Moreover, the 1988 incidence rate of reported aseptic meningitis equaled its 1983 incidence rate (2.4 per 100,000) and cases of meningococcal meningitis were reported at a lower rate in 1988 than in 1983 (0.4 and 0.7 per 100,000 respectively). Annual reports of viral encephalitis cases varied from 12 to 25 during this decade, and the 1988 incidence (n = 15) fell below the midpoint of this range.

In 1988 as in 1987, shigellosis caused the greatest burden of enteric illness, followed by giardiasis, camphylobacteriosis and salmonellosis (excluding typhoid fever). The incidence rate of shigellosis increased 9 percent from 34.2 reported cases in 1987 to 37.8 reported cases per 100,000 in 1988, the highest incidence rate of the decade.

Larger 1987-88 increases in incidence rate occurred for salmonellosis and camphylobacteriosis (17 and 12 percent respectively). In 1988, the incidence rate was the decade's highest for salmonellosis (16.1 per 100,000) but not for camphylobacteriosis (18.6 per 100,000). In contrast, the 1987 and 1988 incidence rates of giardiasis barely differed (25.2 and 25.3 per 100,000 respectively). Reports of typhoid fever and amebiasis cases remained low in 1988.

Coccidioidomycosis or valley fever and tuberculosis (TB) (if prior infection with the tubercle bacillus exists) can occur as opportunistic diseases in persons infected with HIV. The incidence rate of coccidioidomycosis or valley fever increased for the second consecutive year, with an increase of 34 percent from 5.9 in 1987 to 7.9 per 100,000 in 1988, the highest incidence rate of the past six years. (The 1981 incidence rate of 12.1 per 100,000 was the decade-high.) In contrast, the increase in the incidence rate of reported pulmonary TB seen from 1986 to 1987 was not repeated from 1987 to 1988. Instead, the 1988 incidence rate of reported cases of pulmonary TB was lower than the 1986 incidence rate (6.3 and 6.4 per 100,000 respectively).

The incidence rate of Hepatitis B declined for the second consecutive year, with the 1987-88 decrease much larger (29 percent) than the 1986-87 decrease (7 percent). These declines made the 1988 incidence rate of Hepatitis B only 11 percent greater than the rate four years ago in 1984 (17.6 and 15.8 per 100,000 respectively). The temporal trend in reported cases of non-A, non-B Hepatitis was similar, except the 1987-88 decrease was the third consecutive annual decline. The 1988 incidence rate of non-A, non-B Hepatitis returned to the level of the 1982 rate (2.2 per 100,000).

The number of Hepatitis A cases reported in 1988 was the highest yearly count of the decade. However, the 1987-88 increase in Hepatitis A case reports was too small to make the 1988 incidence rate greater than the 1987 incidence rate (58.0 and 58.9 per 100,000 respectively). The steady annual increases of at least 10 percent in the incidence rate of Hepatitis A which began in 1985 thus stopped in 1988.

In 1988 as in all prior years of this decade, no rabies was reported in human beings. In addition, the 45 rabid animal reports in 1988 was one of the lowest annual counts in this decade, surpassed only by less than 40 reports in 1981 and 1983. Reports of the other notifiable zoonotic diseases, i.e. malaria, plague and tularemia, remained low in 1988.

No case of Reyes Syndrome was reported in 1988, the first year during this decade with zero incidence. In contrast, the number of Toxic Shock Syndrome (TSS) cases reported in 1988 was the decade's highest annual incidence. The 1988 incidence rate of TSS (1.94 reported cases per 100,000 women 15 to 44 years of age) was 42 percent greater than the 1987 incidence rate (1.37 reported cases per 100,000 women 15 to 44 years of age).

Sexually Transmitted Diseases

The four sexually transmitted diseases (STDs) for which reporting is required by administrative rule in Arizona are chlamydia, gonorrhea, genital herpes and syphilis. Efforts to reduce the incidence and avert the adverse health consequences of STDs are ongoing by state and local programs. Reported cases of gonorrhea and of primary and secondary syphilis declined from 1987 to 1988 (Table 5-1). Chlamydia continued to increase as Arizona health care providers improved screening and reporting activities. The number of genital herpes cases reported in 1988 differed little from the 1987 reported number.

The 1988 incidence rates of gonorrhea, chlamydia and early syphilis vary considerably by age and gender, as shown in Tables 5-2 through 5-4. Female incidence rates of gonorrhea and chlamydia peak in the late teen years (15-19) and progressively decline thereafter. Compared to women older than 44 years, girls less than 15 years old had a 2.2 times higher incidence rate of gonorrhea (6.1 and 13.6 per 100,000 respectively) and a 3.6 times higher incidence rate of chlamydia (7.6 and 27.6 per 100,000 respectively). Female incidence of early syphilis was highest for 20-24 year olds. Early syphilis was not reported at a higher rate among female children (0-14 years) than among adult women aged 45 or older.

Compared to females, male incidence rates of gonorrhea, chlamydia and early syphilis were highest in older age groups. The first two STDs peaked among 20-24 year olds and the third among 25-29 year olds. In addition, male adults older than 44 years of age had a higher incidence rate of each of the three diseases than did boys younger than 15 years old. After age 34, the incidence rate of gonorrhea was at least three times higher for males than for females in every age group.

National estimates indicate that chlamydia is the most common STD. Since chlamydia became reportable in Arizona in 1987, the number of reported cases steadily increased. The 4881 cases reported in 1988 represented a 66 percent increase over the 1987 case total of 2948. This increase most likely reflects better reporting and screening activities rather than an increase in infections among the population.

Screening programs to identify asymptomatic infected women accounted for the higher incidence rate of reported chlamydia among women than men. Untreated chlamydial infections in women can produce such health effects as pelvic inflammatory disease and infertility. Infants born to untreated, infected women are at risk for ophthalmic and pulmonary infections. Early detection and treatment reduces these complications.

The 14 percent decrease in reported cases of gonorrhea from 1987 to 1988 continued the temporal decline in incidence since 1985. The 1988 gonorrhea incidence rate of 154.6 reported cases per 100,000 was the lowest in eight years and far below the national objective for 1990 of 280 cases per 100,000. Pelvic inflammatory disease (PID) as a consequence of an initial gonococcal infection also declined to 7.5 reported cases per 100,000 females in 1988. PID is a serious infection of the female reproductive tract which may result in sterility and other complications.

Penicillin resistant strains of gonorrhea comprised 13.3 percent of all gonorrhea reported in Arizona in 1988 compared to 3.9 percent in 1987. The rate of reported resistant gonorrheal infections per 100,000 thus nearly doubled from 7.3 in 1987 to 14.5 in 1988. In 1988, 4.4 percent of all gonorrhea reported nationwide was resistant. The Centers for Disease Control (CDC) defines an area as endemic when over 3.5 percent of isolated organisms are resistant. Most Arizona cases have occurred in Maricopa and Pima counties where therapies other than penicillin have been recommended since 1987.

Penicillin resistant gonorrhea continues to occur disproportionally among ethnic minorities, with Blacks and Hispanics accounting for 77.6 percent of reported cases in 1988 (Table 5-5). Blacks and Hispanics also accounted for 57.5 percent of reported cases of all gonorrhea and 51.7 percent of reported early syphilis. Native Americans accounted for at least two times more cases of chlamydia and early syphilis than expected based on their representation in the population.

Early syphilis (primary, secondary and early latent), the communicable stage of infection, is the focus of syphilis prevention programs. Cases of early syphilis reported in Arizona declined 34 percent from 512 in 1987 to 334 in 1988. In contrast, from 1987 to 1988 CDC statistics showed a 17.5 percent national increase in reports of early syphilis.

During 1988, communicable disease investigators (CDI) interviewed 3,488 people with gonorrhea, investigated 3,068 contacts of the gonorrheal cases, interviewed 303 people with early syphilis and interviewed their 685 contacts. Ninety-six percent of syphilis cases were interviewed within three days of report to the health department. The CDI staff also conducted field follow-up on 802 people with positive bloodtests for syphilis and 1,300 people with positive tests for gonorrhea.

Acquired Immunodeficiency Syndrome

As measured by the morbidity and mortality resulting from infection with the Human Immunodeficiency Virus (HIV), the epidemiology of acquired immunodeficiency syndrome (AIDS) in 1988 was similar to that of 1987. During 1988, 1,055 individuals were reported with HIV infection: 228 AIDS cases, 63 cases of AIDS-related complex (ARC) and 764 HIV seropositive individuals. Since the first Arizona resident was diagnosed with AIDS in 1981 until December 31, 1988, 744 AIDS cases, 292 ARC cases and 1,558 HIV seropositive individuals have been reported for a total of 2,584 HIV infected persons (Table 5-6).

Fewer AIDS cases were reported in 1988 than in 1987. The 228 AIDS cases diagnosed and reported in 1988 accounted for 33 percent of the 744 cumulative AIDS cases diagnosed since 1981 and represented a 1.3 percent decrease from the 231 cases diagnosed in 1987. Moreover, in 1988 compared to 1987, 30 less asymptomatic but HIV infected persons (764 and 794 respectively) and ten less cases of ARC were reported (63 and 73 respectively). These declines may be explained by a slowing in the spread of the virus, fewer individuals participating in high risk behaviors, more individuals practicing safer sex and/or a decrease in case reporting by physicians.

It is important to note that in September 1987 CDC revised the 1985 criteria defining AIDS for surveillance purposes. The revised case definition included HIV encepalopathy, HIV wasting syndrome and a broader range of AIDS-indicative opportunistic diseases (e.g., disseminated coccidioidomycosis) and reflected new diagnostic practices and widespread laboratory testing. A more complete depiction of the morbidity due to HIV infection is given by the revised definition. In Arizona, as a result of the 1987 redefinition, 94 cases reported as ARC prior to September 1987 were reclassified as AIDS cases. Thus, the change in case definition alone resulted in a small shift to the left of the epidemic curve by date of diagnosis and a 28.3 percent increase in the number of reported AIDS cases in Arizona for 1987. This increase was not uniform by ethnicity and was most apparent among Blacks, with 10 of 19 total cases due to reclassification.

Case Fatality. Among people diagnosed with AIDS in 1988, 42 percent had died by the end of the year (Table 5-7). The case fatality rate for cumulative AIDS cases was 57 percent as of December 31, 1988, identical to the cumulative case fatality rate through the end of the prior year.

Geography. Since 1981 to December 31, 1988, Graham, Greenlee and Santa Cruz counties reported no case of AIDS (Table 5-8). Apache county reported its first AIDS cases in 1988. Fewer AIDS cases were reported from both Maricopa and Pima counties in 1988 than in 1987. These two metropolitan counties accounted for 89 percent of the AIDS cases diagnosed and reported in 1988 and 93 percent of the AIDS cases reported since 1981. AIDS reports increased the most from 1987 to 1988 for Yuma county. Yuma county accounted for 30 percent of the 1988 AIDS cases reported from rural counties.

Gender. The male to female ratio of diagnosed and reported AIDS cases was 13:1 in both 1987 and 1988 (Table 5-7). While fewer male AIDS cases were reported in 1988 than in 1987, the number of female cases reported did not decline. Thirty-two of the 43 cumulative female AIDS cases since 1981 were diagnosed in either 1987 or 1988.

Risk Behavior. Of the 228 AIDS cases diagnosed in 1988, 145 (68 percent) said that homosexual or bisexual relations was their sole risk behavior, 26 (11 percent) claimed intravenous (IV) drug use as their sole risk behavior and 27 (12 percent) said they engaged in both risk behaviors (Table 5-9). Compared to 1987, 14 fewer cases were associated soley with men having sex with other men in 1988, a 9 percent decline. In contrast, cases associated with IV drug use alone increased 18 percent and cases associated with a combination of IV drug use and homosexuality increased 42 percent from 1987 to 1988. Although these increases are based on small numbers, these transmission categories have consistently increased since 1985 (Figure 2). Nationally, cases in all transmission categories increased at least 36 percent, with the categories of IV drug use and undetermined increasing over 100 percent.

Race/Ethnicity. White non-Hispanics accounted for 197 (85 percent) of all AIDS cases diagnosed in 1988, Hispanics for 21 (10 percent) and Blacks for 6 (4 percent) (Table 5-10). The ethnic-specific relative risk of disease, when based on cumulative cases and compared to white non-Hispanics, was 1.1 for Blacks, 0.47 for Hispanics, 0.46 for Asians and 0.17 for Native Americans. A comparison of Arizona and United States ethnic-specific rates shows that AIDS is not as common among the minority population in Arizona as it is in the rest of the nation.

Age. Most Arizona AIDS cases continue to be diagnosed among persons 20 to 49 years of age. Since 1981, 89 percent of all AIDS cases have been diagnosed among persons between these ages (Table 5-6). When compared to the age distribution of AIDS cases, the distribution of HIV seropositive individuals appears about ten years younger, reflecting a lengthy incubation period. As expected, the age distribution of female cases is much higher due to a greater percentage of transfusion-associated cases. No pediatric (under 13 years of age) AIDS case was reported in 1988.

Projected Cases. Using the 1988 Public Health Service estimate of 365,000 U.S. AIDS cases by the end of 1992, it is expected that over 2,000 Arizonans will be diagnosed with AIDS by that time. At the current rate of increase in cases, the cumulative number of cases will double over the next 15 months in Arizona compared to 18 months nationally.

TABLE 5-1

NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 1983 - 1988

DISEASE	NUMBER OF CASES					
	1983	1984	1985	1986	1987	1988
Vaccine Preventable						
Measles	1	1	241	252	36	4
Mumps	97	203	127	209	196	148
Pertussis	32	27	49	78	41	492
Rubella	8	5	1	2	5	-
H Flu Meningitis Type B	63	56	98	117	90	105
Chickenpox[1]	2584	5827	5255	4980	9708	10597
Central Nervous System						
Aseptic Meningitis	70	71	89	153	151	85
Bacterial Meningitis[2]	24	24	30	168	141	144
Meningococcal Meningitis	20	12	23	16	20	13
Viral Encephalitis	12	13	17	19	17	15
Enteric						
Amebiasis	31	50	40	69	41	40
Campylobacteriosis	539	566	565	587	577	667
Giardiasis	746	1432	1006	965	873	909
Salmonellosis (except typhoid)	498	353	416	454	479	578
Shigellosis	928	886	787	912	1187	1359
Typhoid	19	3	3	9	4	6
Fungal						
Coccidioidomycosis	211	211	191	173	205	284
Hepatitis						
Hepatitis A	919	777	1239	1427	2044	2083
Hepatitis B	365	486	719	890	857	633
Non-A Non-B Hepatitis[3]	101	138	237	188	134	81
Unspecified	198	151	171	151	83	57
Sexually Transmitted[4]						
Genital Herpes	1226	853	998	1061	1395	1344
Gonorrhea	8477	7676	8485	8030	6552	5630
Gonococcal PID[5]	346	335	453	464	281	139
Resistant Gonorrhea[6]	51	47	73	113	256	748
Syphilis(P&S)[7]	177	239	311	252	304	175
Syphilis-Total[8]	501	659	757	696	979	968
Chlamydia[9]	NA	NA	NA	NA	2948	4881
Tuberculosis						
Pulmonary TB	213	222	219	215	235	225
Total TB	264	273	271	261	277	267
Zoonotic						
Human Rabies	0	0	0	0	0	0
Animal Rabies	35	54	124	102	84	45
Malaria	8	11	12	15	18	13
Plague	10	2	0	1	3	1
Tularemia	1	4	4	1	3	1
Other						
Reyes Syndrome	1	4	4	3	1	-
Toxic Shock Syndrome	4	12	13	9	11	16

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[1] Chickenpox was not a notifiable disease prior to 1982.

[2] Effective January 1, 1986, H. flu meningitis and meningococcal meningitis were included in the total case count of bacterial meningitis.

[3] Non-A Non-B Hepatitis became a notifiable disease in 1982.

[4] STD data obtained from Centers for Disease Control.

[5] PID is pelvic inflammatory disease.

[6] Includes PPNG, penicillase producing Neisseria gonorrheae, a form of gonorrhea which destroys penicillin and CMRNG, chromosomally mediated resistant Neisseria gonorrhoeae, a form of gonorrhea which is resistant to penicillin.

[7] Primary and secondary syphilis only.

[8] Early, late, congenital and other.

[9] Chlamydia reporting effective January 28, 1987

TABLE 5-2

FREQUENCY OF REPORTED CASES AND RATES[1] OF GONORRHEA BY AGE AND GENDER, ARIZONA, 1988

	MALE			FEMALE			TOTAL		
Age Group	Population	# Cases	Rate	Population	# Cases	Rate	Population	# Cases	Rate
0-4	146,000	12	8.2	140,000	12	8.6	286,000	24	8.4
5-9	144,000	3	2.1	138,000	6	4.3	282,000	9	3.2
10-14	150,000	17	11.3	150,000	40	26.7	300,000	57	19.0
15-19	172,000	530	308.1	165,000	757	458.8	337,000	1,287	381.9
20-24	178,000	1,029	578.1	174,000	713	409.8	352,000	1,742	494.9
25-29	160,000	741	463.1	156,000	371	237.8	316,000	1,112	351.9
30-34	139,000	450	323.7	137,000	202	147.4	276,000	652	236.2
35-39	108,000	254	235.2	110,000	80	72.7	218,000	334	153.2
40-44	90,000	143	158.9	92,000	50	54.3	182,000	193	106.0
45-54	163,000	119	73.0	174,000	28	16.1	337,000	147	44.5
55-64	159,000	48	30.2	185,000	5	2.7	344,000	53	16.5
65-Over	181,000	17	9.2	230,000	3	1.3	411,000	20	5.2
Total	1,790,000	3,363	187.9	1,851,000	2,267	122.5	3,641,000	5,630	154.6

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[1] Rates per 100,000 population. Population estimates used to calculate rates differ from the baseline projections shown in Tables 6-1 through 6-4.

TABLE 5-3

FREQUENCY OF REPORTED CASES AND RATES[1] OF CHLAMYDIA BY AGE AND GENDER ARIZONA, 1988

Age Group	MALE			FEMALE			TOTAL		
	Population	# Cases	Rate	Population	# Cases	Rate	Population	# Cases	Rate
0-4	146,000	17	11.6	140,000	44	31.4	286,000	61	21.3
5-9	144,000	1	0.7	138.000	11	7.9	282,000	12	4.3
10-14	150,000	3	2.0	150,000	63	42.0	300,000	66	22.0
15-19	172,000	165	95.9	165,000	1,443	874.5	337,000	1,608	477.2
20-24	178,000	285	160.1	174,000	1,512	868.9	352,000	1,797	510.5
25-29	160,000	161	100.6	156,000	617	395.5	316,000	778	246.2
30-34	139,000	73	52.5	137,000	252	183.9	276,000	325	117.8
35-39	108,000	26	24.1	110,000	82	74.6	218,000	108	49.5
40-44	90,000	13	14.4	92,000	50	54.5	182,000	63	34.6
45-54	163,000	12	7.4	174,000	28	16.1	337,000	40	11.9
55-64	159,000	6	3.8	185,000	9	4.9	344,000	15	4.4
65-Over	181,000	6	3.3	230,000	8	3.5	411,000	14	3.4
Total	1,790,000	768	42.9	1,851,000	4,119	222.5	3,641,000	4,887	134.2

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[1] Rates per 100,000 population. Population estimates used to calculate rates differ from the baseline projections shown in Tables 6-1 through 6-4.

TABLE 5-4

FREQUENCY OF REPORTED CASES AND RATES[1] OF EARLY SYPHILIS BY AGE AND GENDER, ARIZONA, 1988

Age Group	MALE Population	MALE # Cases	MALE Rate	FEMALE Population	FEMALE # Cases	FEMALE Rate	TOTAL Population	TOTAL # Cases	TOTAL Rate
0-4	146,000	1	0.7	140,000	1	0.7	286,000	2	0.7
5-9	144,000	0	0.0	138,000	0	0.0	282,000	0	0.0
10-14	150,000	1	0.7	150,000	2	1.3	300,000	3	1.0
15-19	172,000	17	9.9	165,000	25	15.2	337,000	42	12.5
20-24	178,000	44	24.7	173,000	34	19.5	352,000	78	22.1
25-29	160,000	60	37.5	156,000	28	17.9	316,000	88	27.9
30-34	139,000	32	23.0	137,000	14	10.2	276,000	46	16.6
35-39	108,000	15	13.9	110,000	10	9.1	218,000	25	11.5
40-44	90,000	13	14.4	92,000	11	11.9	182,000	24	12.5
45-54	163,000	8	4.9	174,000	5	2.9	337,000	13	3.9
55-64	159,000	8	5.0	185,000	3	1.6	344,000	11	3.3
65-Over	181,000	2	1.1	230,000	0	0.0	411,000	2	0.6
Total	1,790,000	201	11.2	1,851,000	133	7.2	3,641,000	334	9.2

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[1] Rates per 100,000 population. Population estimates used to calculate rates differ from the baseline projections shown in Tables 6-1 through 6-4.

TABLE 5-5

FREQUENCY OF REPORTED CASES AND PERCENT DISTRIBUTION OF EARLY AND LATE SYPHILIS, GONORRHEA AND CHLAMYDIA BY ETHNICITY, ARIZONA, 1988

Race/Ethnic Group	Percent Distribution	Syphilis				Gonorrhea				Chlamydia		Herpes	
		Early		Late		Resistant		Total					
White[1]	71.0%	85	25.5%	42	6.7%	126	16.9%	1,304	23.2%	1,614	33.1%	834	62.1%
Black[1]	2.4%	60	17.9%	29	4.7%	403	53.9%	1,905	33.8%	241	4.9%	96	7.1%
Hispanic	14.0%	113	33.8%	468	75.0%	177	23.7%	1,334	23.7%	864	17.7%	171	12.7%
Asian or Pacific Islander	0.7%	1	0.3%	10	1.6%	1	0.1%	5	0.1%	13	0.3%	2	0.2%
American Indian or Alaskan Native	4.8%	62	18.6%	34	5.5%	18	2.4%	642	11.4%	1,293	26.5%	26	1.9%
Not Specified	7.1%	13	3.9%	41	6.5%	23	3.0%	440	7.8%	856	17.5%	215	16.0%
Total	100.0%	334	100.0%	624	100.0%	748	100.0%	5,630	100.0%	4,881	100.0%	1,344	100.0%

[1] Not of Hispanic origin

TABLE 5-6

FREQUENCY DISTRIBUTION OF HIV INFECTION BY SUBCATEGORIES AND AGE GROUP, ARIZONA, 1981 - 1988

Age Group (Years)	AIDS	ARC	HIV Ab+	Total
Under 5	1	0	2	3
5-12	2	3	3	8
13-19	5	3	27	35
20-29	186	100	589	875
30-39	332	100	533	965
40-49	142	57	216	415
Over 49	76	19	83	178
Unknown	-	-	104	104
TOTAL	744	282	1,557	2,583

TABLE 5-7

GENDER DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND ANNUAL CASE FATALITY RATES, ARIZONA, 1981 - 1988

	1981-83	1984	1985	1986	1987	1988	TOTAL
# Male Cases	13	24	83	146	223	212	701
# Female Cases	1	3	2	5	16	16	43
# Total Cases	14	27	85	151	239	228	744
# Known Deaths	12	25	68	96	125	96	422
% Mortality	86	93	80	64	52	42	57

TABLE 5-8

DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND COUNTY, ARIZONA, 1981 - 1988

County	1981-83	1984	1985	1986	1987	1988	TOTAL
Apache	0	0	0	0	0	2	2
Cochise	1	0	1	0	2	2	6
Coconino	0	0	0	1	2	4	7
Gila	0	1	0	0	1	0	2
Graham	0	0	0	0	0	0	0
Greenlee	0	0	0	0	0	0	0
La Paz	0	0	0	0	1	1	2
Maricopa	10	19	61	113	182	163	548
Mohave	0	0	0	1	2	4	7
Navajo	0	0	0	0	1	2	3
Pima	2	4	23	30	43	39	141
Pinal	1	1	0	5	2	0	9
Santa Cruz	0	0	0	0	0	0	0
Yavapai	0	2	0	1	2	3	8
Yuma	0	0	0	0	1	8	9
TOTAL	14	27	85	151	239	228	744

TABLE 5-9

DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND TRANSMISSION CATEGORY, ARIZONA, 1981-88

Transmission	1981-83	1984	1985	1986	1987	1988	TOTAL
Gay/Bisexual Male	9	9	64	107	159	145	503
IV Drug Abuser	1	2	5	9	22	26	65
Gay and IV Drug Abuser	3	3	7	17	19	27	76
Adult Hemophiliac	0	1	2	4	6	4	17
Heterosexual Contact	0	0	0	3	9	4	16
Adult Transfusion	1	1	3	6	17	8	35
Adult Undetermined	0	1	4	3	7	14	29
Pediatric Hemophiliac	0	0	0	0	2	0	2
Pediatric Transfusion	0	0	0	1	0	1	0

TABLE 5-10

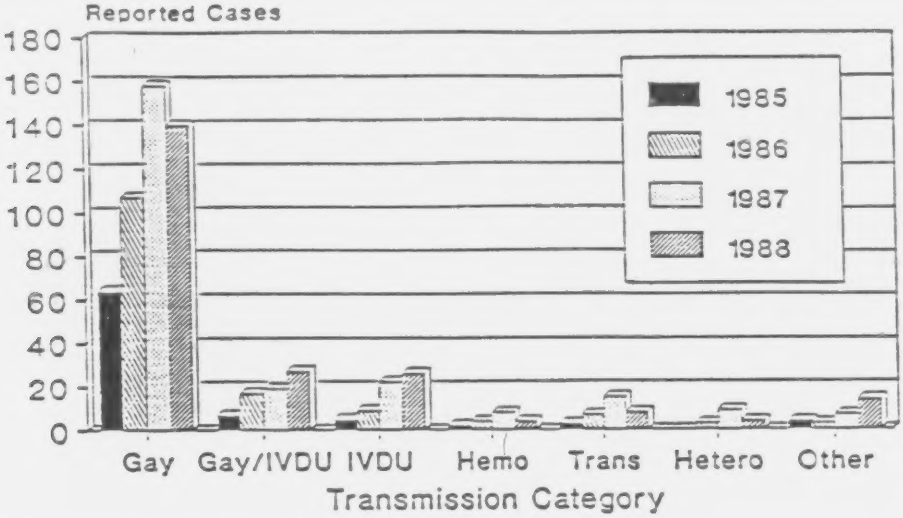
DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND ETHNIC GROUP AND RATES[1] FOR CUMULATIVE TOTAL, ARIZONA, 1981 - 1988

Ethnicity	1981-83	1984	1985	1986	1987	1988	Total	Rate
White	11	23	76	132	201	199	640	31.6
Black	0	1	4	4	10	6	25	34.1
Hispanic	2	2	3	15	23	21	66	15.0
Native American	1	0	1	0	3	4	8	5.5
Asian	0	0	1	0	2	0	3	14.5
Unknown	0	0	1	0	2	0	3	24.9

[1] Cases per 100,000 population based on 1980 Census population data

FIGURE 2.

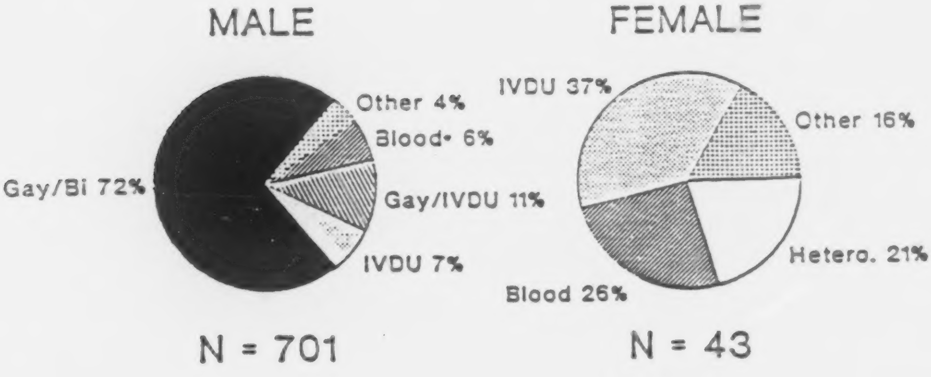
NUMBER OF REPORTED AIDS CASES BY RISK GROUP AND YEAR OF DIAGNOSIS, ARIZONA, 1985 - 1988



As of December 31, 1988

FIGURE 3.

PROPORTIONAL DISTRIBUTION OF REPORTED AIDS CASES BY RISK GROUP WITHIN EACH GENDER, ARIZONA, 1981-1988



* Transfusion and hemophilia associated
As of December 31, 1988

SUMMARY OF STATUS: PROGRESS AND PROBLEMS

Two questions are used to summarize the prior five sections. What progress has been made to date in improving the health status of Arizona residents? What problems appear evident in health status? Increases for three or more years in annual incidence rates of death or disease are viewed as signals of a problem. A problem also is judged to exist if the 1988 incidence rate of death or disease is the highest either of the six-year period examined in the report or of a longer time period. Conversely, progress is indexed by a declining trend in annual incidence rates of death or disease of at least three years' duration or when the 1988 rate is the lowest of the six-year period. Results indicative of progress or problems are outlined below for four major areas: 1) Mothers and Infants; 2) Total Mortality and Chronic Diseases; 3) Sudden and/or Violent Death; and 4) Infectious Diseases. The results in each area are not listed in any priority order.

MOTHERS AND INFANTS

PROGRESS	PROBLEMS
1. Infants died from respiratory distress syndrome at the decade's lowest rate in 1988.	1. The 1988 infant mortality rate was the highest of the past six years.
2. Congenital anomalies not involving the circulatory, respiratory or central nervous system caused infants to die at the decade's lowest rate in 1988.	2. The 1988 ratio of low birthweight (LBW) babies was higher than the 1980 ratio.
3. The 1988 male infant mortality rate was the lowest of the past 4 years.	3. The 1988 female infant mortality was the highest of the past 4 years.
4. For the past three years, the infant mortality rates of Apache, Cochise, Pima and Yuma counties were lower than both the national and statewide infant death rates.	4. The percent of babies born preterm increased for the third year to 12.8 in 1988.
	5. The percent of very low birthweight among 1988 LBW babies was the decade's highest at 15.7.
	6. The percent of women giving birth with less than five prenatal visits increased for the third year to 9.9 in 1988.
	7. The LBW risk of babies born to mothers with less than five prenatal visits declined to 12.3 percent in 1988 from 13.2 percent in 1986.

8. The percent of women giving birth in 1988 who began prenatal care in the first trimester was the decade's lowest value at 66.2 percent.

9. The 1988 percent of unwed women giving birth was the new high in recorded history at 28.6 percent.

10. The continued increase in births to unmarried women occurred among all ethnic groups.

11. The 1988 birth rate of 15-19 year olds was the six-year high.

12. The 1988 infant mortality rate for other perinatal conditions was the highest of the past six years.

TOTAL MORTALITY AND CHRONIC DISEASES

PROGRESS

1. The 1988 death rates for heart disease, stroke and atherosclerosis were the lowest of the past 6 years.

2. Arizonans were less likely to die from diseases of the heart and stroke than their national counterparts.

3. As in prior years, Arizonans in 1988 were still less likely to die from cancer than their national counterparts.

4. Arizona males had a lower total mortality risk than their national counterparts in 1988 as in the prior five years.

5. The 1988 male death rate for COPD was the lowest of the decade.

6. Adolescents who were either male or lived in rural areas had the lowest cancer death rate of the past six years in 1988.

PROBLEMS

1. Arizonans were more likely to die from cancer during 1985 to 1988 than during 1980 to 1984.

2. The 1988 death rates for diabetes and pneumonia/influenza were the highest of the decade.

3. The death rate for chronic obstructive pulmonary disease (COPD), over 26/100,000 since 1984, has exceeded the U.S. rate since 1980.

4. In 1988, infectious and parasitic diseases moved to 9th from the 11th leading cause of death because of increasing deaths from Human Immunodeficiency Virus infection.

5. Arizona females had a higher total mortality risk than their national peers during the past six years.

6. The 1988 female death rates for COPD, pneumonia/influenza, and infectious and parasitic diseases were the highest of the decade.

7. The 1988 COPD death rate of 45 to 64 year old adults was the lowest of the decade.

8. Urban adults aged 45 to 64 died from heart disease, cancer and COPD at the decade's lowest rates.

9. Heart disease death rates in 1988 were the six-year lowest for adolescents through elderly.

10. The 1988 total mortality rate of urban male children was the lowest of the decade.

7. The 1988 male death rates for diabetes and infectious and parasitic diseases were the highest of the decade.

8. Rural males had higher 1988 death rates than urban males for eight of twelve leading causes of death.

9. The 1988 total mortality rate of rural males aged 45 to 64 was the highest of the decade.

10. Rural adults aged 45 to 64 had almost the same risk of dying from heart disease in 1988 as in 1980.

11. The survival chances of elderly females were at the worst level of the decade in 1988.

12. The 1988 total mortality rate of rural elderly was the six-year high.

13. Rural female children died in 1988 at the six-year highest rate.

14. The 1988 cancer death rate of female adolescents was the six-year high.

SUDDEN AND/OR VIOLENT DEATH

PROGRESS

1. Urban children drowned at the lowest rate of the decade in both 1987 and 1988.

2. The 1988 vehicular fatality rate of male children was the lowest of the past six years.

3. The 1988 homicide death rate of rural adolescents (15-19) was the lowest of the decade.

4. The 1988 vehicular fatality rate of urban young adults (20-44) was the lowest of the decade.

5. The 1988 female suicide death rate was the lowest of the decade.

PROBLEMS

1. Female children and rural children were murdered at the highest rates of the decade in 1988.

2. The 1988 vehicular fatality rate of female children was the highest of the past six years.

3. Survival chances of rural children worsened during this decade, mainly due to motor vehicle injuries.

4. The 1988 suicide death rate for rural adolescents was the decade-high.

5. The 1988 motor vehicle fatality rates of rural and urban adolescents barely differed from the 1980 rates.

6. Urban young adults in 1988 died by their own hand or were fatally injured in a non-vehicular event at the decade's highest rates.

7. The 1988 death rates for homicide and other unintentional injuries among female young adults were the highest of the past six years.

8. Unintentional injuries killed adults aged 45 to 64 at almost identical rates in 1988 and 1983.

9. Rural adults aged 45 to 64 died from unintentional injuries in 1988 at the six-year highest rate.

10. Males committed suicide at a 4.5 times higher rate than females in 1988, the decade's largest difference.

INFECTIOUS DISEASES

PROGRESS

1. No case of rubella was reported in 1988, the first year in the decade with zero incidence.

2. Reported cases of non-A, non-B Hepatitis declined for the third year, so the 1988 rate equalled the 1982 rate.

3. The steady annual increase in the incidence rate of Hepatitis A that began in 1985 stopped in 1988.

4. No case of Reyes Syndrome was reported in 1988, the first year in the decade with zero incidence.

5. Reported cases of gonorrhea again declined in 1988, making the 1988 rate 55 percent better than the 1990 national objective.

PROBLEMS

1. An epidemic of whooping cough occurred in 1988, with a 500 percent higher rate of cases reported than in any prior year of the 1980s.

2. The 1988 incidence rates of reported shigellosis, salmonellosis and Toxic Shock syndrome were the highest of the decade.

3. The 1988 incidence rate of Valley Fever was the highest of the past six years.

4. Girls less than 15 years old had much higher 1988 incidence rates of gonorrhea and chlamydia than did women older than 44 years.

5. The rate of penicillin resistant gonorrhea reported continued to increase in 1988 and set a new all-time high.

6. No case of AIDS was diagnosed and reported among children under 13 years old in 1988.

6. Blacks and Hispanics accounted for 78 percent of penicillin resistant gonorrhea cases reported in 1988.

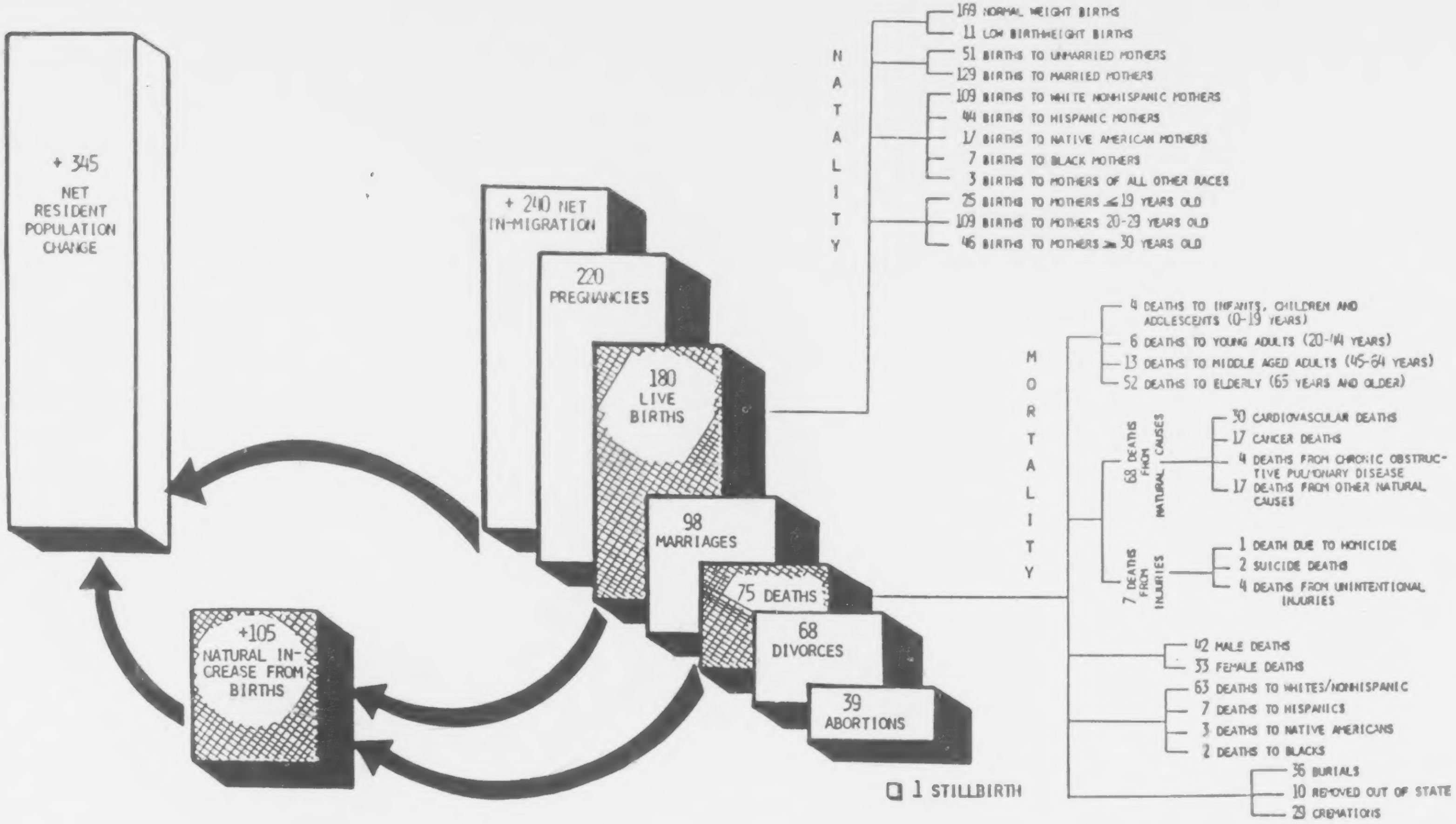
7. During 1988, 1,055 individuals were reported with HIV infection, making the new cumulative total 2,584.

8. AIDS cases were reported from 12 of 15 counties in 1988 compared to 11 in 1987, 6 in 1986 and 3 in 1985.

9. The number of 13 to 19 year olds reported with HIV seropositivity doubled from 1987 to 1988.

PART II: VITAL STATISTICS

FIGURE 4. AVERAGE DAILY VITAL EVENTS, ARIZONA, 1988


+ 345 NET RESIDENT POPULATION CHANGE
+ 240 NET IN-MIGRATION
220 PREGNANCIES
180 LIVE BIRTHS
98 MARRIAGES
75 DEATHS
68 DIVORCES
39 ABORTIONS
+105 NATURAL INCREASE FROM BIRTHS
1 STILLBIRTH
NATALITY
169 NORMAL WEIGHT BIRTHS
11 LOW BIRTHWEIGHT BIRTHS
51 BIRTHS TO UNMARRIED MOTHERS
129 BIRTHS TO MARRIED MOTHERS
109 BIRTHS TO WHITE NONHISPANIC MOTHERS
44 BIRTHS TO HISPANIC MOTHERS
17 BIRTHS TO NATIVE AMERICAN MOTHERS
7 BIRTHS TO BLACK MOTHERS
3 BIRTHS TO MOTHERS OF ALL OTHER RACES
25 BIRTHS TO MOTHERS ≤ 19 YEARS OLD
109 BIRTHS TO MOTHERS 20-29 YEARS OLD
46 BIRTHS TO MOTHERS ≥ 30 YEARS OLD
MORTALITY
4 DEATHS TO INFANTS, CHILDREN AND ADOLESCENTS (0-19 YEARS)
6 DEATHS TO YOUNG ADULTS (20-44 YEARS)
13 DEATHS TO MIDDLE AGED ADULTS (45-64 YEARS)
52 DEATHS TO ELDERLY (65 YEARS AND OLDER)
68 DEATHS FROM NATURAL CAUSES
30 CARDIOVASCULAR DEATHS
17 CANCER DEATHS
4 DEATHS FROM CHRONIC OBSTRUCTIVE PULMONARY DISEASE
17 DEATHS FROM OTHER NATURAL CAUSES
7 DEATHS FROM INJURIES
1 DEATH DUE TO HOMICIDE
2 SUICIDE DEATHS
4 DEATHS FROM UNINTENTIONAL INJURIES
42 MALE DEATHS
33 FEMALE DEATHS
63 DEATHS TO WHITES/NONHISPANIC
7 DEATHS TO HISPANICS
3 DEATHS TO NATIVE AMERICANS
2 DEATHS TO BLACKS
36 BURIALS
10 REMOVED OUT OF STATE
29 CREMATIONS

POPULATION STATISTICS

TABLE 6-1

POPULATION BY COUNTY OF RESIDENCE, ARIZONA, 1983 - 1988

COUNTY	1983	1984	1985	1986	1987	1988
ARIZONA[1]	2,975,627	3,080,284	3,197,804	3,351,880	3,468,907	3,594,345
Apache	54,366	55,482	56,357	60,499	62,399	64,388
Cochise	90,745	93,358	96,293	97,603	100,267	102,422
Coconino	80,165	83,388	85,973	88,951	91,869	94,810
Gila	39,230	38,502	38,104	39,700	40,127	40,504
Graham	23,925	23,237	23,330	24,533	24,694	24,605
Greenlee	11,042	9,999	8,683	9,576	9,630	9,531
La Paz	13,628	14,066	14,391	14,100	14,150	14,294
Maricopa	1,663,748	1,731,141	1,800,033	1,911,612	1,990,840	2,069,353
Mohave	63,996	68,653	72,593	77,371	79,288	81,402
Navajo	69,842	71,242	72,324	73,973	75,686	77,546
Pima	582,078	603,330	624,347	642,991	659,112	685,282
Pinal	98,491	99,751	100,150	103,795	107,169	110,317
Santa Cruz	22,271	21,730	27,111	27,547	29,183	30,143
Yavapai	78,398	78,622	88,000	91,697	95,036	97,961
Yuma	83,703	87,783	90,116	87,932	89,457	91,419

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[1] County estimates may not total to Arizona population due to rounding.

Source: Baseline Projections Arizona Department of Economic Security, Population Statistics Unit (12/12/86).

TABLE 6-2

POPULATION BY AGE AND GENDER, AND COUNTY OF RESIDENCE, ARIZONA, 1988

COUNTY		All ages	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
ARIZONA[1]	T	3,594,345	326,766	546,877	524,731	630,307	492,643	326,187	288,299	438,531
	M	1,772,970	167,140	277,683	262,268	329,453	249,572	161,882	138,086	187,185
	F	1,821,375	159,626	269,194	262,560	320,854	243,071	164,305	150,213	251,346
Apache	T	64,388	10,054	15.043	11,191	9,390	6,821	4,669	3,380	3,836
	M	31,592	5,144	7,644	5,642	4,397	3,263	2,250	1,552	1,698
	F	32,796	4,910	7,399	5,549	4,993	3,558	2,419	1,828	2,138
Cochise	T	102,422	8,359	16,295	16,609	16,725	13,399	9,844	8,855	12,321
	M	50,691	4,277	8,283	8,322	8,501	6,739	4,840	4,246	5,483
	F	51,731	4,082	8,012	8,287	7,971	6,660	5,004	4,609	6,838
Coconino	T	94,810	10,028	16,588	14,497	22,348	13,011	7,633	5,540	5,061
	M	47,206	5,130	8,469	7,143	10,981	6,746	3,807	2,678	2,252
	F	47,604	4,898	8,119	7,354	11,367	6,265	3,826	2,862	2,809
Gila	T	40,504	3,263	6,880	5,782	5,283	5,004	3,788	3,869	6,669
	M	19,558	1,665	3,427	2,810	2,534	2,484	1,858	1,804	2,998
	F	20,946	1,598	3,453	2,972	2,749	2,520	1,930	2,065	3,671
Graham	T	24,605	2,088	4,681	3,845	3,919	3,137	2,255	1,948	2,952
	M	12,499	1,064	2,338	1,830	2,131	1,774	1,130	968	1,312
	F	12,326	1,024	2,343	2,015	1,788	1,363	1,125	980	1,640
Greenlee	T	9,531	783	2,020	1,556	1,356	1,295	831	897	794
	M	4,601	401	1,000	769	648	655	385	428	329
	F	4,930	382	1,020	787	708	640	446	469	465
La Paz	T	14,294	1,168	2,426	1,861	2,007	1,619	1,269	1,356	2,583
	M	7,085	597	1,234	931	991	795	623	678	1,239
	F	7,209	571	1,192	930	1,016	824	646	678	1,344
Maricopa	T	2,069,353	190,202	306,399	301,225	366,975	290,986	191,155	162,417	246,504
	M	1,025,813	97,303	156,582	151,986	187,770	148,029	95,492	78,263	103,294
	F	1,043,540	92,899	149,239	149,239	179,205	142,957	95,663	84,154	143,210
Mohave	T	81,402	5,839	11,234	11,425	11,818	9,575	7,336	8,471	15,267
	M	40,244	2,990	5,756	5,717	5,807	5,037	3,644	4,043	7,333
	F	41,158	2,849	5,478	5,708	6,011	4,808	3,692	4,428	7,934
Navajo	T	77,546	9,743	17,001	13,798	10,749	9,171	6,570	4,696	5,422
	M	33,473	4,974	7,522	5,931	4,275	3,831	2,798	2,085	2,360
	F	44,073	4,763	9,479	8,317	6,474	5,340	3,772	2,611	3,062
Pima	T	685,282	54,855	95,444	96,933	130,410	98,313	61,960	57,366	86,078
	M	336,009	28,047	48,597	48,530	65,425	50,084	30,700	27,140	35,629
	F	349,273	26,808	46,847	48,403	64,985	48,229	31,260	30,226	50,449
Pinal	T	110,317	10,685	18,625	16,904	16,802	13,701	9,582	9,407	14,167
	M	55,741	5,468	9,466	8,546	8,857	7,255	4,901	4,580	6,477
	F	54,576	5,217	9,159	8,358	7,945	6,446	4,681	4,827	7,690
Santa Cruz	T	30,143	3,389	5,734	5,111	4,224	3,708	2,653	2,374	2,779
	M	14,561	1,735	2,906	2,572	2,008	1,748	1,253	1,069	1,154
	F	15,582	1,654	2,828	2,539	2,216	1,960	1,480	1,305	1,625
Yavapai	T	97,961	6,537	13,219	11,866	13,848	11,834	8,918	10,100	21,150
	M	47,945	3,345	6,763	5,832	7,099	5,956	4,335	4,786	9,581
	F	50,016	3,192	6,456	6,034	6,749	5,878	4,583	5,314	11,569
Yuma	T	91,419	9,760	15,261	12,071	15,104	11,043	7,696	7,591	12,934
	M	45,866	4,988	7,682	5,829	8,351	5,431	3,851	3,750	6,039
	F	45,553	4,772	7,579	6,242	6,753	5,612	3,245	3,841	6,895

[1] County estimates may not total to Arizona population due to rounding.

Source: Baseline Projections, Arizona Department of Economic Security, Population Statistics Unit, 12/12/86.

TABLE 6-3

POPULATION BY AGE AND GENDER IN URBAN AND RURAL AREAS,[1] ARIZONA, 1988

Area and Gender	Under 1	1-14	15-19	20-44	45-64	65+	TOTAL
URBAN	48,943	597,957	189,350	1,112,896	472,898	332,591	2,754,635
Male	24,961	305,568	95,210	565,559	231,595	138,929	1,361,822
Female	23,982	292,389	94,140	547,337	241,303	193,662	1,392,813
RURAL	16,566	210,177	64,967	300,467	141,588	105,947	839,712
Male	8,449	105,845	31,961	148,263	68,373	48,257	411,148
Female	8,117	104,332	33,006	152,204	73,215	57,690	428,564
TOTAL	65,509	808,134	254,317	1,413,363	614,486	438,538	3,594,347
Male	33,410	411,413	127,171	713,822	299,968	187,186	1,772,970
Female	32,099	396,721	127,146	699,541	314,518	251,352	1,821,377

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[1] Maricopa and Pima counties comprise Arizona's urban areas while the remaining 13 counties represent rural areas.

Source: Baseline Projections, Arizona Department of Economic Security, Population Statistics Unit (12/12/86).

BIRTH STATISTICS

TABLE 7-1

RATES OF NATURAL INCREASE FROM BIRTHS PER 1,000 POPULATION, BY COUNTY OF RESIDENCE, ARIZONA AND UNITED STATES, 1983-1988

AREA	1983	1984	1985	1986	1987	1988	Percent change from 1987
Apache	26.2	29.0	27.1	23.5	24.2	24.3	+0.4
Cochise	9.4	10.4	9.1	8.8	8.4	8.7	+3.6
Coconino	18.3	17.9	18.2	16.2	17.5	16.4	-6.3
Gila	7.6	7.2	6.8	5.7	4.0	6.1	+52.5
Graham	10.4	11.3	10.2	8.4	10.2	8.8	-13.7
Greenlee	10.3	11.3	13.1	5.8	5.9	4.9	-16.9
Maricopa	10.0	10.0	11.2	11.1	11.0	11.0	0.0
Mohave	5.6	5.9	2.9	3.5	3.7	3.1	-16.2
Navajo	20.9	20.3	19.8	19.1	20.1	19.1	-5.0
Pima	8.8	8.1	8.7	8.3	7.6	8.6	+13.2
Pinal	11.2	10.5	12.7	10.7	11.2	9.8	-12.5
Santa Cruz	14.4	16.1	13.8	13.0	13.3	15.7	+18.0
Yavapai	0.9	0.4	0.4	1.1	- 0.5	0.7	+140.0
Yuma	13.0	13.5	13.8	14.8	14.4	14.7	+2.1
La Paz	6.5	3.0	6.9	6.2	3.3	4.0	+21.2
ARIZONA	10.3	10.1	10.9	10.6	10.6	10.5	-0.9
U.S.[a]	6.9	6.9	7.1	6.8	7.0	7.1	+1.4

[a] U.S. data from the National Center for Health Statistics. Rates for 1983-1985 are final. Rates for 1986-1988 are provisional.

TABLE 7-2

BIRTHS BY COUNTY OF RESIDENCE
ARIZONA, 1950-88

County	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	20,510	36,655	37,591	50,049	51,620	52,628	52,919	55,109	59,344	60,822	63,320	65,544
Apache	761	1,479	1,369	1,627	1,681	1,845	1,787	1,817	1,853	1,757	1,852	1,892
Cochise	765	1,651	1.352	1,570	1,646	1,555	1,565	1,618	1,559	1,524	1,606	1,638
Coconino	768	1,452	1,407	1,824	1,733	1,768	1,808	1,813	1,946	1,828	2,006	1,966
Glia	717	744	693	705	760	810	683	672	642	625	569	659
Graham	385	334	371	512	509	468	435	446	406	395	445	418
Greenlee	440	255	232	272	299	256	185	195	161	106	124	111
La Paz	NA	NA	NA	NA	NA	NA	236	195	234	215	198	214
Maricopa	8,805	17,789	19,695	26,769	27,800	28,598	28,758	30,711	33,780	35,334	36,624	38,108
Mohave	230	184	465	871	886	886	926	988	968	1,065	1,177	1,225
Navajo	895	1,443	1,484	1,899	1,816	1,883	1,911	1,864	1,895	1,896	1,981	1,957
Pima	3,862	7,131	6,735	8,931	9,130	9,155	9,585	9,678	10,278	10,423	10,924	11,217
Pinal	1,407	1,943	1,555	1,840	1,899	1,945	1,869	1,849	2,049	2,053	2,126	2,094
Santa Cruz	250	345	297	499	519	491	457	512	523	504	547	665
Yavapai	492	630	543	937	998	1,067	1,032	999	1,088	1,129	1,171	1,285
Yuma	733	1,275	1,393	1,793	1,944	1,901	1,682	1,752	1,962	1,968	1,970	2,095

TABLE 7-3

BIRTHS BY COUNTY OF OCCURRENCE,[1]
ARIZONA, 1950 - 1988

County	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	20,728	36,499	37,455	50,068	51,604	52,368	52,544	54,889	59,305	60,775	63,347	65,657
Apache	906	1,539	1,245	1,237	1,228	1,318	1,259	1,419	1,663	1,641	1,776	1,854
Cochise	790	1,573	1,382	1,511	1,618	1,500	1,453	1,513	1,474	1,420	1,484	1,560
Coconino	633	1,440	1,360	2,263	2,114	2,239	2,207	2,188	2,264	2,163	2,349	2,238
Gila	659	684	687	576	613	668	560	570	538	510	438	449
Graham	400	297	315	397	407	376	360	374	412	400	474	434
Greenlee	402	249	240	309	306	256	173	178	89	8	5	6
La Paz	NA	NA	NA	NA	NA	NA	3	4	2	5	1	3
Maricopa	8,934	18,016	20,015	28,076	29,194	30,038	30,314	32,191	35,410	36,902	38,457	39,959
Mohave	242	145	289	861	876	834	858	909	975	1,029	1,084	1,147
Navajo	891	1,163	1,229	1,183	1,107	1,158	1,243	1,210	1,155	1,080	1,136	1,158
Pima	3,902	7,174	6,923	9,906	10,208	10,111	10,307	10,415	11,036	11,161	11,745	12,106
Pinal	1,464	1,944	1,396	920	905	902	850	873	973	1,025	879	842
Santa Cruz	271	442	327	310	316	253	282	344	326	361	437	559
Yavapai	510	628	538	846	926	1,002	952	925	1,009	1,051	1,079	1,180
Yuma	724	1,205	1,509	1,673	1,786	1,713	1,723	1,776	1,979	2,019	2,003	2,162

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[1] Resident (64,656) and non-resident (1,001) births occurring in Arizona.

TABLE 7-4

RESIDENT BIRTHS BY MONTH OF OCCURRENCE
ARIZONA, 1975-88

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	3,324	3,008	3,255	3,149	3,147	3,073	3,446	3,507	3,574	3,471	3,128	3,461	39,543
Percent	8.4	7.6	8.2	8.0	8.0	7.8	8.7	8.9	9.0	8.8	7.9	8.8	100.0
1976	3,346	3,071	3,297	3,063	3,206	3,137	3,426	3,569	3,669	3,382	3,328	3,534	40,028
Percent	8.4	7.7	8.2	7.7	8.0	7.8	8.6	8.9	9.2	8.4	8.3	8.8	100.0
1977	3,456	3,233	3,547	3,277	3,398	3,314	3,492	3,802	3,667	3,605	3,450	3,586	41,827
Percent	8.3	7.7	8.5	7.8	8.1	7.9	8.3	9.1	8.8	8.6	8.2	8.6	100.0
1978	3,563	3,251	3,506	3,173	3,414	3,309	3,695	3,999	3,878	3,789	3,721	3,760	43,058
Percent	8.3	7.6	8.1	7.4	7.9	7.7	8.6	9.3	9.0	8.8	8.6	8.7	100.0
1979	3,693	3,381	3,829	3,485	3,632	3,678	4,036	4,288	4,179	4,086	4,088	4,174	46,549
Percent	7.9	7.3	8.2	7.5	7.8	7.9	8.7	9.2	9.0	8.8	8.8	9.0	100.0
1980	4,006	3,748	4,069	3,822	4,039	3,982	4,497	4,369	4,707	4,414	4,060	4,336	50,049
Percent	8.0	7.5	8.1	7.6	8.1	8.0	9.0	8.7	9.4	8.8	8.1	8.7	100.0
1981	4,139	3,868	4,311	3,934	3,990	4,325	4,533	4,662	4,537	4,647	4,264	4,410	51,620
Percent	8.0	7.5	8.4	7.6	7.7	8.4	8.8	9.0	8.8	9.0	8.3	8.5	100.0
1982	4,252	3,925	4,355	4,160	4,107	4,280	4,608	4,691	4,798	4,634	4,300	4,518	52,628
Percent	8.1	7.5	8.3	7.9	7.8	8.8	8.8	8.9	9.1	8.8	8.2	8.6	100.0
1983	4,420	4,016	4,532	4,291	4,181	4,195	4,545	4,866	4,721	4,529	4,230	4,393	52,919
Percent	8.4	7.6	8.6	8.1	7.9	7.9	8.6	9.2	8.9	8.6	8.0	8.3	100.0
1984	4,397	4,209	4,456	4,244	4,331	4,368	4,954	4,979	5,013	4,842	4,693	4,623	55,109
Percent	8.0	7.6	8.1	7.7	7.9	7.9	9.0	9.0	9.1	8.8	8.6	8.3	100.0
1985	4,841	4,435	4,814	4,460	4,820	4,693	5,231	5,476	5,228	5,196	4,994	5,156	59,344
Percent	8.2	7.5	8.1	7.5	8.1	7.9	8.8	9.2	8.8	8.8	8.4	8.7	100.0
1986	4,915	4,572	4,947	4,696	4,799	4,935	5,452	5,489	5,552	5,367	4,800	5,298	60,822
Percent	8.1	7.5	8.1	7.7	7.9	8.1	9.0	9.0	9.1	8.8	7.9	8.7	100.0
1987	5,108	4,831	5,243	5,034	5,006	5,136	5,647	5,599	5,562	5,442	5,179	5,533	63,320
Percent	8.1	7.6	8.3	8.0	7.9	8.1	8.9	8.8	8.8	8.6	8.2	8.7	100.0
1988	5,303	5,130	5,342	5,105	5,247	5,501	5,633	5,980	5,816	5,584	5,311	5,592	65,544
Percent	8.1	7.8	8.2	7.8	8.0	8.4	8.6	9.1	8.9	8.5	8.1	8.5	100.0

TABLE 7-5

BIRTHS BY MONTH AND DAY OF OCCURRENCE, ARIZONA RESIDENTS, 1988

Day of Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
01	137	170	196	173	147	195	207	198	185	174	226	218
02	129	188	181	138	165	195	163	188	217	143	174	182
03	160	165	182	128	196	204	137	209	168	203	201	160
04	169	166	163	178	173	164	156	200	127	209	185	125
05	176	200	140	173	158	154	185	208	167	221	147	160
06	183	178	134	163	197	202	218	137	204	196	140	225
07	186	146	182	184	146	183	215	142	207	231	174	160
08	190	189	201	221	137	176	204	196	218	160	180	210
09	129	188	194	144	182	184	155	212	218	127	175	184
10	161	189	211	149	196	194	144	236	172	188	176	169
11	153	188	167	178	191	137	199	211	168	205	198	148
12	209	202	136	200	178	141	176	222	197	194	151	169
13	169	144	134	179	167	166	192	168	217	162	133	195
14	191	153	174	154	153	189	169	143	178	189	188	180
15	182	184	187	140	141	200	205	205	226	177	189	187
16	128	183	176	139	165	203	175	252	226	144	180	177
17	162	178	184	119	202	208	137	182	184	171	208	132
18	177	209	190	182	180	170	190	221	158	194	179	145
19	206	199	144	179	179	169	211	188	187	181	149	238
20	178	147	130	199	185	222	205	152	216	183	141	223
21	155	156	169	193	138	206	199	170	179	186	186	222
22	193	197	188	192	131	188	183	197	217	132	204	220
23	135	186	178	170	176	196	193	214	201	142	216	192
24	152	188	186	137	191	193	148	197	162	183	151	130
25	187	172	201	176	174	172	192	182	148	209	166	123
26	206	180	162	196	185	131	198	190	211	207	157	154
27	198	163	151	180	204	176	196	195	229	196	142	227
28	203	170	172	211	164	199	183	169	197	208	187	197
29	200	152	189	175	145	201	189	187	217	168	223	202
30	175	0	183	155	119	183	153	198	215	146	185	184
31	124	0	157	0	182	0	156	211	0	155	0	154
TOTAL	5,303	5,130	5,342	5,105	5,247	5,501	5,633	5,980	5,816	5,584	5,311	5,592

TABLE 7-6

BIRTHS TO ARIZONA RESIDENTS OCCURRING IN ARIZONA
BY COUNTY AND MONTH, ARIZONA 1988

County of Occurrence	TOTAL	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
ARIZONA[1]	64,656	5,236	5,059	5,266	5,031	5,174	5,422	5,530	5,887	5,747	5,516	5,246	5,542
Apache	1,706	157	131	123	125	139	153	162	155	135	150	138	138
Cochise	1,468	134	103	129	114	127	145	106	126	127	123	119	115
Coconino	2,186	172	183	189	188	167	178	180	199	187	181	159	203
Gila	448	35	37	40	36	35	42	40	32	35	40	44	32
Graham	433	36	31	45	42	43	24	43	34	31	35	32	37
Greenlee	6	2	1	1	1	0	0	0	0	0	0	1	0
La Paz	3	1	1	0	0	1	0	0	0	0	0	0	0
Maricopa	39,805	3,243	3,082	3,235	3,089	3,165	3,345	3,381	3,592	3,621	3,359	3,287	3,406
Mohave	1,093	99	87	91	81	97	84	93	93	106	94	80	88
Navajo	1,150	98	104	73	88	78	87	106	107	119	98	85	107
Pima	11,856	918	909	995	908	971	1,002	1,029	1,133	1,013	1,052	943	983
Pinal	840	52	91	61	61	66	75	72	81	73	73	64	71
Santa Cruz	458	27	38	30	35	35	37	41	42	45	53	39	36
Yavapai	1,178	89	95	95	101	115	100	93	106	95	81	98	110
Yuma	2,026	173	166	159	162	135	150	184	187	160	177	157	216

[1] 888 births to Arizona residents occurred out-of-state.

TABLE 7-7

BIRTHS BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE
ARIZONA, 1988

County of Residence	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Not Stated
ARIZONA	65,544	160	3,300	5,583	19,372	20,513	11,912	4,062	622	18	2
Apache	1,892	6	112	169	535	518	363	162	26	1	-
Cochise	1,638	4	76	147	545	502	265	77	22	-	-
Coconino	1,966	5	86	157	559	601	393	132	32	1	-
Gila	659	-	46	75	233	178	81	41	5	-	-
Graham	418	2	24	43	142	126	56	22	3	-	-
Greenlee	111	-	7	7	41	31	17	6	2	-	-
La Paz	214	-	10	37	78	61	21	7	-	-	-
Maricopa	38,108	92	1,849	3,061	10,991	12,335	7,140	2,320	311	8	1
Mohave	1,225	1	64	121	423	359	185	52	18	1	1
Navajo	1,957	6	126	178	612	537	331	133	33	1	-
Pima	11,217	22	502	941	3,263	3,498	2,116	762	108	5	-
Pinal	2,094	15	210	242	714	536	262	98	17	-	-
Santa Cruz	665	2	33	58	161	213	137	54	7	-	-
Yavapai	1,285	1	59	137	358	386	221	107	16	-	-
Yuma	2,095	4	96	210	717	632	324	89	22	1	-

TABLE 7-8

RESIDENT BIRTHS BY MOTHER'S RACE AND AGE GROUP
ARIZONA, 1985-88

Year	Race[1]	Total	-15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Not Stated
1985											
	White	51,034	67	6,486	16,874	15,834	8,743	2,624	391	12	3
	Native American	5,478	25	980	1,916	1,321	805	349	78	3	1
	Black	1,969	15	417	753	488	203	86	7	-	-
	Asian	863	3	33	178	336	239	67	7	-	-
	Total	59,344	110	7,916	19,721	17,979	9,990	3,126	483	15	4
1986											
	White	52,088	98	6,666	16,536	16,331	9,172	2,854	414	15	2
	Native American	5,718	42	1,044	2,012	1,369	839	344	65	2	1
	Black	2,157	12	469	777	541	268	83	7	-	-
	Asian	859	-	45	180	321	226	76	10	-	-
	Total	60,822	152	8,224	19,505	18,562	10,505	3,357	497	17	3
1987											
	White	54,018	83	7,023	16,329	17,223	9,744	3,160	435	20	1
	Native American	6,036	37	1,061	2,005	1,528	943	389	72	1	-
	Black	2,289	22	495	772	624	273	86	16	1	-
	Asian	923	-	48	208	316	243	98	10	-	-
	Other	54	-	6	20	21	3	3	1	-	-
	Total	63,320	142	8,633	19,334	19,712	11,206	3,736	534	22	1
1988											
	White	55,773	103	7,177	16,385	17,792	10,334	3,451	517	14	-
	Native American	6,240	37	1,107	1,965	1,679	948	425	77	2	-
	Black	2,406	18	534	790	641	324	90	9	-	-
	Asian	1,052	2	58	208	380	295	89	18	2	-
	Other	73	-	7	24	21	11	7	1	-	2
	Total	65,544	160	8,883	19,372	20,513	11,912	4,062	622	18	2

[1] Each race includes births to mothers who indicated Hispanic origin on certificate, compare Table 7-9.

TABLE 7-9

RESIDENT LIVE BIRTHS BY MOTHER'S ETHNICITY AND AGE GROUP, ARIZONA, 1988

Age	All Ethnic Groups	White[1]	Non-White[2]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	160	103	57	79	81	103	71	32	18	0	18	37	8	29	2	0	2
15-17	3,300	2,567	733	1,259	2,041	2,567	1,209	1,358	241	8	233	470	40	430	22	2	20
18-19	5,583	4,610	973	1,877	3,706	4,610	1,819	2,791	293	6	287	637	49	588	43	3	40
20-24	19,372	16,385	2,987	5,537	13,835	16,385	5,413	10,972	790	17	773	1,965	91	1,874	232	16	216
25-29	20,513	17,792	2,721	4,447	16,066	17,792	4,363	13,429	641	6	635	1,679	61	1,618	401	17	384
30-34	11,912	10,334	1,578	2,202	9,710	10,334	2,161	8,173	324	6	318	948	22	926	306	13	293
35-39	4.062	3,451	611	778	3,284	3,451	764	2,687	90	2	88	425	11	414	96	1	95
40+	642	531	111	154	488	531	152	379	9	0	9	79	1	78	23	1	22
TOTAL	65,544	55,773	9,771	16,333	49,211	55,773	15,952	39,821	2,406	45	2,361	6,240	283	5,957	1,125	53	1,072

[1] Includes Whites of Hispanic origin

[2] Includes Non-Whites of Hispanic origin

TABLE 7-10

BIRTHS BY MOTHER'S COUNTY OF RESIDENCE AND EDUCATION ARIZONA, 1988

County of Residence	Total	YEARS OF EDUCATION None	1-8	9-12	13-16	17+	Not Stated
ARIZONA	65,544	122	4,403	37,137	20,418	2,644	820
Apache	1,892	6	94	1,315	388	33	56
Cochise	1,638	0	107	905	482	43	101
Coconino	1,966	6	75	1,199	614	68	4
Gila	659	0	14	504	129	7	5
Graham	418	0	22	247	137	9	3
Greenlee	111	1	6	73	29	2	0
La Paz	214	0	14	99	24	2	75
Maricopa	38,108	81	2,634	20,550	12,887	1,579	377
Mohave	1,225	0	44	852	262	12	55
Navajo	1,957	7	100	1,367	396	34	53
Pima	11,217	8	582	6,173	3,685	730	39
Pinal	2,094	4	251	1,412	366	28	33
Santa Cruz	665	1	82	427	139	13	3
Yavapai	1,285	0	47	804	386	45	3
Yuma	2,095	8	331	1,210	494	39	13

TABLE 7-11

BIRTHS BY COUNTY OF RESIDENCE OF MOTHER, RACE[1] AND SEX OF CHILD ARIZONA, 1988

County of	Total Births			White			Non-White			Black			Native American			Other		
Residence	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	65,544	33,573	31,971	55,209	28,327	26,882	10,355	5,246	5,109	3,075	1,558	1,517	6,163	3,120	3,043	1,097	568	529
Apache	1,892	955	937	299	142	157	1,593	813	780	6	1	5	1,582	810	772	5	2	3
Cochise	1,638	854	784	1,398	738	660	240	116	124	156	77	79	11	6	5	73	33	40
Coconino	1,966	1,024	942	998	529	469	698	495	473	47	26	21	911	462	449	10	7	3
Gila	659	310	349	446	212	234	213	98	115	4	0	4	203	96	107	6	2	4
Graham	418	218	200	350	181	169	68	37	31	4	2	2	62	33	29	2	2	0
Greenlee	111	44	67	106	44	62	5	0	5	1	0	1	4	0	4	0	0	0
La Paz	214	119	95	157	84	73	57	35	22	1	0	1	55	35	20	1	0	1
Maricopa	38,108	19,458	18,650	34,216	17,455	16,761	3,892	2,003	1,889	2,063	1,068	995	1,108	559	549	721	376	345
Mohave	1,225	633	592	1,162	604	558	63	29	34	4	1	3	53	25	28	6	3	3
Navajo	1,957	1,012	945	640	335	305	1,317	677	640	20	13	7	1,294	662	632	3	2	1
Pima	11,217	5,849	5,368	9,910	5,188	4,722	1,307	661	646	562	275	287	508	256	252	237	130	107
Pinal	2,094	1,050	1,044	1,684	849	835	410	201	209	100	57	43	303	141	162	7	3	4
Santa Cruz	665	333	332	659	331	328	6	2	4	5	2	3	0	0	0	1	0	1
Yavapai	1,285	651	634	1,231	627	604	54	24	30	6	3	3	42	20	22	6	1	5
Yuma	2,095	1,063	1,032	1,953	1,008	945	142	55	87	96	33	63	27	15	12	19	7	12

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[1] Each race includes births of infants whose either one or both parents are of Hispanic origin, compare Table 7-12.

TABLE 7-12

HISPANIC[1] BIRTHS BY COUNTY OF RESIDENCE OF MOTHER, RACE AND SEX OF CHILD ARIZONA, 1988

County of Residence	Total Births			White			Black			Native American			Other		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	19,454	9,884	9,570	18,306	9,292	9,014	322	174	148	741	373	368	85	45	40
Apache	77	42	35	65	35	30	0	0	0	12	7	5	0	0	0
Cochise	623	323	300	601	309	292	14	11	3	4	1	3	4	2	2
Coconino	246	137	109	207	111	96	6	4	2	33	22	11	0	0	0
Gila	173	78	95	155	68	87	0	0	0	17	10	7	1	0	1
Graham	145	74	71	140	73	67	1	0	1	4	1	3	0	0	0
Greenlee	65	29	36	64	29	35	1	0	1	0	0	0	0	0	0
La Paz	85	47	38	69	38	31	0	0	0	15	9	6	1	0	1
Maricopa	10,234	5,158	5,076	9,728	4,896	4,832	141	75	66	311	156	155	54	31	23
Mohave	120	59	61	105	56	49	0	0	0	14	3	11	1	0	1
Navajo	147	74	73	113	54	59	5	4	1	29	16	13	0	0	0
Pima	4,590	2,380	2,209	4,271	2,206	2,064	110	65	45	189	97	92	20	12	8
Pinal	924	458	466	816	406	410	12	9	3	94	43	51	2	0	2
Santa Cruz	607	308	299	602	306	296	5	2	3	0	0	0	0	0	0
Yavapai	195	93	102	184	90	94	1	0	1	9	3	6	1	0	1
Yuma	1,223	623	600	1,186	614	572	26	4	22	10	5	5	1	0	1

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[1] Either one or both parents are of Hispanic origin.

TABLE 7-13

LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE OF MOTHER AND RACE[1] OF CHILD, ARIZONA, 1988

County of Residence	Total LBW Births	White	Nonwhite	Black	Native American	Other
ARIZONA	4,110	3,321	789	391	331	67
Apache	115	23	92	1	91	0
Cochise	98	82	16	13	0	3
Coconino	119	79	40	5	35	0
Gila	50	33	17	1	14	2
Graham	26	19	7	1	6	0
Greenlee	4	3	1	0	1	0
La Paz	11	9	2	0	2	0
Maricopa	2,381	1,994	387	282	55	50
Mohave	88	85	3	0	3	0
Navajo	116	39	77	1	76	0
Pima	681	585	96	57	29	10
Pinal	136	106	30	14	16	0
Santa Cruz	58	55	3	3	0	0
Yavapai	95	92	3	1	1	1
Yuma	132	117	15	12	2	1

[1] Each race includes low-birthweight births of infants whose either one or both parents are of Hispanic origin. Compare Tables 7-14, 7-17 and 7-18.

TABLE 7-14

HISPANIC[1] LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE OF MOTHER AND RACE OF CHILD, ARIZONA, 1988

County of Residence	Total LBW Births	White	Non-White	Black	Native American	Other
ARIZONA	1,025	992	33	20	10	3
Apache	6	6	0	0	0	0
Cochise	31	30	1	1	0	0
Coconino	12	11	1	1	0	0
Gila	13	13	0	0	0	0
Graham	12	11	1	1	0	0
Greenlee	1	1	0	0	0	0
La Paz	3	3	0	0	0	0
Maricopa	521	508	13	8	2	3
Mohave	3	3	0	0	0	0
Navajo	4	4	0	0	0	0
Pima	229	221	8	4	4	0
Pinal	57	53	4	1	3	0
Santa Cruz	53	50	3	3	0	0
Yavapai	12	11	1	0	1	0
Yuma	68	67	1	1	0	0

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[1] Either one or both parents are of Hispanic origin.

TABLE 7-15

LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE ARIZONA, 1970-1988

County of Residence	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	2,773	2,563	3,089	3,103	3,076	3,204	3,377	3,712	3,785	4,107	4,110
Apache	102	93	98	109	117	111	109	137	129	120	115
Cochise	113	131	114	122	111	141	125	104	87	109	98
Coconino	125	102	112	112	96	120	113	132	113	115	119
Gila	37	46	38	34	54	31	41	36	50	32	50
Graham	38	29	28	43	22	20	13	29	29	15	26
Greenlee	17	17	14	15	11	10	10	7	4	7	4
La Paz	NA	NA	NA	NA	NA	25	10	16	18	10	11
Maricopa	1,446	1,293	1,628	1,664	1,655	1,695	1,927	2,095	2,232	2,412	2,381
Mohave	26	40	58	47	72	52	66	52	73	81	88
Navajo	121	123	118	121	95	102	107	109	111	135	116
Pima	487	433	559	549	511	592	562	650	607	695	681
Pinal	109	116	124	120	141	114	103	137	138	145	136
Santa Cruz	19	18	33	21	32	24	16	46	35	36	58
Yavapai	31	33	57	50	66	73	72	69	62	79	95
Yuma	102	89	108	96	93	94	103	93	97	116	132

TABLE 7-16

LOW-BIRTHWEIGHT BIRTHS BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE
ARIZONA, 1988

County of Residence	Total Births All Weights	Total Low-Birthweight Births	Under 15	15-19	20-24	25-29	30-34	35-39	40+
ARIZONA	65,544	4,110	19	666	1,160	1,188	747	274	56
Apache	1,892	115	2	21	29	29	26	5	3
Cochise	1,638	98	0	19	27	30	14	7	1
Coconino	1,966	119	0	14	27	34	31	8	5
Gila	659	50	0	10	19	12	4	4	1
Graham	418	26	0	3	10	6	4	2	1
Greenlee	111	4	0	1	0	2	1	0	0
La Paz	214	11	0	2	2	5	2	0	0
Maricopa	38,108	2,381	11	363	676	712	434	157	28
Mohave	1,225	88	0	39	29	29	9	6	0
Navajo	1,957	116	0	37	22	39	18	7	4
Pima	11,217	681	2	258	192	205	131	43	8
Pinal	2,094	136	0	56	32	30	35	9	0
Santa Cruz	665	58	1	22	15	10	11	8	2
Yavapai	1,285	95	0	39	32	24	13	10	2
Yuma	2,095	132	3	27	48	21	24	8	1

TABLE 7-17

LOW-BIRTHWEIGHT BIRTHS BY MOTHER'S ETHNICITY AND AGE GROUP, ARIZONA, 1988

Age	All Ethnic Groups	White[1]	Non-White[2]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	19	13	6	8	11	13	8	5	3	0	3	3	0	3	0	0	0
15-17	275	214	61	105	170	214	104	110	25	1	24	32	0	32	4	0	4
18-19	391	319	72	134	257	319	130	189	36	0	36	35	4	31	1	0	1
20-24	1,160	958	202	348	812	958	345	613	105	0	105	83	1	82	14	2	12
25-29	1,188	970	218	213	975	970	210	760	105	0	105	90	3	87	23	0	23
30-34	747	625	122	144	603	625	139	486	46	2	44	58	2	56	18	1	17
35-39	274	226	48	63	211	226	62	164	15	0	15	25	1	24	8	0	8
40+	56	45	11	10	46	45	10	35	0	0	0	10	0	10	1	0	1
TOTAL	4,110	3,370	740	1,025	3,085	3,370	1,008	2,362	335	3	332	336	11	325	69	3	66

[1] Includes Whites of Hispanic origin

[2] Includes Non-Whites of Hispanic origin

TABLE 7-18

BIRTH RATIOS[1] OF LOW-BIRTHWEIGHT BABIES BY MOTHER'S ETHNICITY AND AGE GROUP, ARIZONA, 1988

Age	All Ethnic Groups	White[2]	Non-White[3]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	11.9	12.6	10.5	10.1	13.6	12.6	11.3	15.6	16.7	-	16.7	8.1	-	10.3	-	-	-
15-17	8.3	8.3	8.3	8.3	8.3	8.3	8.6	8.1	10.4	-	10.3	6.8	-	7.4	18.2	-	20.0
18-19	7.0	6.9	7.4	7.1	6.9	6.9	7.1	6.8	12.3	-	12.5	5.5	8.2	5.3	2.3	-	2.5
20-24	6.0	5.8	6.8	6.3	5.9	5.8	6.4	5.6	13.3	0.0	13.6	4.2	1.1	4.4	6.0	12.5	5.6
25-29	5.8	5.5	8.0	4.8	6.1	5.5	4.8	5.7	16.4	**	16.5	5.4	4.9	5.4	5.7	-	6.0
30-34	6.3	6.0	7.7	6.5	6.2	6.0	6.4	5.9	14.2	-	13.8	6.1	9.1	6.0	5.9	7.7	5.8
35-39	6.7	6.5	7.9	8.1	6.4	6.5	8.1	6.1	16.7	-	17.0	5.9	9.1	5.8	8.3	-	8.4
40+	8.7	8.5	9.9	6.5	9.4	8.5	6.6	9.2	-	-	-	12.7	-	12.8	4.3	-	4.5
TOTAL	6.3	6.0	7.6	6.3	6.3	6.0	6.3	5.9	13.9	6.7	14.1	5.4	3.9	5.5	6.1	5.7	6.2

[1] Low-birthweight births ratios per 100 live births in corresponding group and calculated only if at least ten live births recorded in 1988

[2] Includes Whites of Hispanic origin

[3] Includes Non-Whites of Hispanic origin

- No low-birthweight births recorded in 1988

** Fewer than ten live births

TABLE 7-19

DISTRIBUTION OF LOW-BIRTHWEIGHT BIRTHS AND LBW RISK[1] BY AMOUNT OF PRENATAL CARE AND COUNTY OF RESIDENCE, ARIZONA, 1988

	Distribution of LBW births by number of prenatal visits						Percent distribution of LBW births by number of prenatal visits[2]						Birth ratios of LBW babies by number of prenatal visits				
County of Residence	All amounts	None	1-4	5-8	9+	Unknown	All amounts	None	1-4	5-8	9+	Unknown	All amounts	None	1-4	5-8	9+
ARIZONA	4,110	263	529	985	2,194	139	100.0	6.4	12.9	24.0	53.4	3.4	6.3	14.9	11.3	8.5	4.8
Apache	115	12	21	33	48	1	100.0	10.4	18.3	28.7	41.7	1.0	6.1	21.1	10.1	7.1	4.2
Cochise	98	7	10	27	48	6	100.0	7.1	10.2	27.6	49.0	6.1	6.0	31.8	9.7	7.3	4.4
Coconino	119	6	17	24	71	1	100.0	5.0	14.3	20.2	59.7	1.0	6.1	10.2	8.3	5.6	5.6
Gila	50	5	13	18	13	1	100.0	10.0	26.0	36.0	26.0	2.0	7.6	25.0	17.3	8.6	3.7
Graham	26	1	4	6	13	2	100.0	3.8	15.4	23.1	50.0	7.7	6.2	20.0	13.3	5.7	4.9
Greenlee	4	0	0	2	2	0	100.0	0.0	0.0	50.0	50.0	0.0	3.6	0.0	0.0	4.3	5.1
La Paz	11	2	4	1	3	1	100 0	18.2	36.4	9.1	27.3	9.1	5.1	7.1	19.0	2.1	4.9
Maricopa	2,381	119	272	550	1,335	105	100.0	5.0	11.4	23.1	56.1	4.4	6.2	16.3	12.0	10.3	4.7
Mohave	88	4	15	27	40	2	100.0	4.5	17.0	30.7	45.5	2.3	7.2	6.3	12.6	7.9	6.3
Navajo	116	7	23	21	59	6	100.0	6.0	19.8	18.1	50.9	5.2	5.9	13.2	8.1	4.0	5.6
Pima	681	48	86	177	364	6	100.0	7.0	12.6	26.0	53.5	1.0	6.1	13.6	9.6	7.4	4.8
Pinal	136	15	27	34	57	3	100.0	11.0	19.9	25.0	41.9	2.2	6.5	21.7	12.4	6.3	4.6
Santa Cruz	58	3	11	16	28	0	100.0	5.2	19.0	27.6	48.3	0.0	8.7	10.0	13.8	8.3	7.8
Yavapai	95	10	10	22	50	3	100.0	10.5	10.5	33.8	52.6	3.2	7.4	34.5	25.4	11.5	6.7
Yuma	132	24	16	27	63	2	100.0	18.2	12.1	20.5	47.7	1.5	6.3	10.0	13.7	7.4	4.7

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[1] Low-birthweight babies as a percent of all live birth in specific category.

[2] Percent distribution may not total due to rounding.

TABLE 7-20

BIRTHS BY PERIOD OF GESTATION, NUMBER OF PRENATAL VISITS AND BIRTHWEIGHT, ARIZONA, 1988

	All amounts of prenatal[1] visits			NUMBER OF PRENATAL VISITS: None			1-4 Visits			5-8 Visits			9+ Visits		
Period of Gestation	All births	All LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births
20-27 weeks	422	291	69.0	41	30	73.2	105	73	69.5	117	83	70.9	139	91	65.5
28-31 weeks	719	402	55.9	53	30	56.6	135	68	50.4	210	122	58.1	310	175	56.5
32-35 weeks	3,914	1,196	30.6	149	43	28.9	470	152	32.3	985	318	32.3	2,221	656	29.5
36 weeks	3,367	375	11.1	81	10	12.3	268	38	14.2	670	80	11.9	2,307	243	10.5
37-39 weeks	30,780	982	3.2	635	49	7.7	1,977	85	4.3	5,220	186	3.6	22,548	650	2.9
40 weeks	10,910	186	1.7	214	13	6.1	571	17	3.0	1,680	35	2.1	8,303	115	1.4
41 weeks	5,757	99	1.7	97	7	7.2	349	13	3.7	910	23	2.5	4,312	54	1.3
42-45 weeks	5,079	120	2.4	116	6	5.2	349	19	5.4	911	33	3.6	3,6[illegible]0	60	1.7
Other or not stated	4,596	459	10.0	375	75	20.0	478	64	13.4	908	105	11.6	2,232	150	6.7
TOTAL	65,544	4,110	6.3	1,761	263	14.9	4,702	529	11.3	11,611	985	8.5	45,992	2,194	4.8

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[1] Includes records with unknown or unspecified number of prenatal visits.

TABLE 7-21

SINGLE AND PLURAL RESIDENT LIVE BIRTHS BY BIRTHWEIGHT, ARIZONA, 1983-1988

Birthweight in grams	1983	1984	1985	1986	1987	1988
Under 1000, total	217	244	289	313	360	332
Single	165	206	235	255	273	260
Plural	52	38	54	58	87	72
1001-1500, total	297	283	323	368	374	346
Single	231	225	253	303	291	275
Plural	66	58	70	65	83	71
1501-2000, total	617	603	692	648	700	736
Single	480	482	556	514	545	568
Plural	137	121	136	134	155	168
2001-2500, total	2,073	2,247	2,408	2,456	2,673	2,696
Single	1,804	1,980	2,084	2,089	2,279	2,296
Plural	269	267	324	367	394	400
2501-4000, total	44,385	46,155	49,720	51,033	52,784	54,948
Single	43,872	45,663	49,241	50,476	52,181	54,332
Plural	513	492	479	557	603	616
4001 and over, total	5,279	5,538	5,863	5,958	6,396	6,433
Single	5,275	5,536	5,861	5,956	6,391	6,428
Plural	4	2	2	2	5	5
All weights, total[1]	52,919	55,109	59,344	60,822	63,320	65,544
Single	51,878	54,131	58,775	59,637	61,989	64,209
Plural	1,041	978	1,069	1,185	1,331	1,335

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[1] Includes records with unspecified birthweight.

TABLE 7-22

FREQUENCY DISTRIBUTION OF BIRTHS BY AMOUNT OF PRENATAL VISITS AND COUNTY OF RESIDENCE, ARIZONA, 1988

County	Total	None	1-4	5-8	9+	Unknown
ARIZONA	65,544	1,761	4,702	11,611	45,992	1,478
Apache	1,892	57	207	463	1,145	20
Cochise	1,638	22	103	372	1,097	44
Coconino	1,966	59	205	430	1,261	11
Gila	659	20	75	209	349	6
Graham	418	5	30	105	265	13
Greenlee	111	2	22	46	39	2
La Paz	214	28	21	48	61	56
Maricopa	38,108	730	2,262	5,342	28,676	1,098
Mohave	1,225	64	119	342	637	63
Navajo	1,957	53	283	521	1,059	41
Pima	11,217	352	898	2,405	7,526	36
Pinal	2,094	69	217	538	1,226	44
Santa Cruz	665	30	80	192	361	2
Yavapai	1,285	29	63	235	947	11
Yuma	2,095	241	117	363	1,343	31

TABLE 7-23

FREQUENCY DISTRIBUTION OF BIRTHS BY MOTHER'S AGE GROUP AND RACE AND TRIMESTER OF PREGNANCY PRENATAL CARE BEGAN, ARIZONA, 1988

Trimester of pregnancy prenatal care began by race	ALL AGES	UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40+
ALL RACES[1]	65,544	160	3,300	5,583	19,372	20,513	11,912	4,062	642
1st trimester	43,381	54	1,444	2,636	11,642	15,004	9,105	3,064	432
2nd trimester	13,941	54	1,118	1,808	4,738	3,576	1,828	674	145
3rd trimester	4,739	32	435	688	1,722	1,104	545	177	36
No prenatal care	1,723	14	162	225	623	389	218	77	15
Not stated	1,760	6	141	226	647	440	216	70	14
WHITE[2]	39,821	32	1,358	2,791	10,972	13,429	8,173	2,687	379
1st trimester	29,752	11	656	1,461	7,502	10,816	6,809	2,218	279
2nd trimester	6,900	12	464	888	2,348	1,811	956	349	72
3rd trimester	1,902	6	149	302	660	467	236	67	15
No prenatal care	576	2	50	62	217	141	71	26	7
Not stated	691	1	39	78	245	194	101	27	6
HISPANIC[3]	15,952	71	1,209	1,819	5,413	4,363	2,161	764	152
1st trimester	8,366	23	506	775	2,610	2,579	1,309	480	84
2nd trimester	4,201	21	377	559	1,529	1,029	478	165	43
3rd trimester	1,858	16	184	271	694	423	199	55	16
No prenatal care	805	6	76	112	306	164	104	35	2
Not stated	722	5	66	102	274	168	71	29	7
BLACK	2,406	18	241	293	790	641	324	90	9
1st trimester	1,390	9	108	118	432	412	237	66	8
2nd trimester	605	6	72	101	213	145	51	17	0
3rd trimester	192	3	31	33	68	32	19	6	0
No prenatal care	80	0	13	16	24	21	5	0	1
Not stated	139	0	17	25	53	31	12	1	0
NATIVE AMERICAN	6,240	37	470	637	1,965	1,679	948	425	79
1st trimester	3,088	10	166	269	955	901	512	231	44
2nd trimester	2,024	15	197	243	601	521	299	123	25
3rd trimester	717	6	69	73	277	162	79	46	5
No prenatal care	240	6	22	34	66	57	35	15	5
Not stated	171	0	16	18	66	38	23	10	0
OTHER RACE	1,125	2	22	43	232	401	306	96	23
1st trimester	785	1	8	13	143	296	238	69	17
2nd trimester	211	0	8	17	47	70	44	20	5
3rd trimester	70	1	2	9	23	20	12	3	0
No prenatal care	22	0	1	1	10	6	3	1	0
Not stated	37	0	3	3	9	9	9	3	1

[1] Includes records with unknown or unspecified race

[2] Non-Hispanic

[3] For the purpose of this classification Hispanics are white of Hispanic origin who contributed to 97.7 percent of all Hispanic births in Arizona in 1988.

TABLE 7-24

FREQUENCY DISTRIBUTION OF BIRTHS BY MOTHER'S AGE GROUP AND RACE AND NUMBER OF PREVIOUS LIVE BIRTHS, ARIZONA, 1988

Number of previous live births by race	ALL AGES	UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40+
ALL RACES[1]	65,544	160	3,300	5,583	19,372	20,513	11,912	4,062	642
None	24,759	156	2,782	3,834	8,415	6,264	2,597	648	63
1	20,018	3	448	1,367	6,600	6,766	3,664	1,058	112
2	11,117	0	42	277	2,932	4,233	2,654	862	117
3	5,033	0	2	48	923	1,955	1,447	565	93
4 or more	4,024	0	2	5	310	1,135	1,443	885	244
WHITE[2]	39,821	32	1,358	2,791	10,972	13,429	8,173	2,687	379
None	16,237	31	1,211	2,117	5,361	4,792	2,147	529	44
1	12,812	1	127	565	3,697	4,698	2,816	824	84
2	6,381	0	10	86	1,407	2,478	1,719	609	78
3	2,411	0	0	8	314	949	770	315	55
4 or more	1,692	0	1	0	97	422	666	396	110
HISPANIC[3]	15,952	71	1,209	1,819	5,413	4,363	2,161	764	152
None	5,579	71	991	1,172	2,053	948	262	72	10
1	4,567	0	198	489	1,887	1,344	500	131	18
2	2,966	0	16	121	958	1,099	591	159	22
3	1,553	0	1	27	368	575	406	151	24
4 or more	1,232	0	1	4	125	385	394	247	76
BLACK	2,406	18	241	293	790	641	324	90	9
None	815	17	183	163	261	128	51	12	0
1	735	1	50	92	271	197	94	30	0
2	424	0	7	25	145	149	76	19	3
3	244	0	1	7	76	97	50	10	3
4 or more	168	0	0	1	31	67	47	19	3
NATIVE AMERICAN	6,240	37	470	637	1,965	1,679	948	425	79
None	1,619	35	376	348	610	192	42	11	5
1	1,534	1	72	214	674	399	129	41	4
2	1,187	0	9	43	407	456	208	56	8
3	784	0	0	6	159	324	207	80	8
4 or more	909	0	0	0	57	260	327	213	52
OTHER RACE	1,125	2	22	43	232	401	306	96	23
None	514	2	21	34	130	204	95	24	4
1	370	0	1	7	71	128	125	32	6
2	159	0	0	2	21	51	60	19	6
3	41	0	0	0	6	10	14	9	2
4 or more	23	0	0	0	0	1	9	10	3

[1] Includes records with unknown or unspecified race. Totals for each race include records with unspecified number of previous live births.

[2] Non-Hispanic

[3] For the purpose of this classification Hispanics are white of Hispanic origin who contributed to 97.7 percent of all Hispanic births in Arizona in 1988.

TABLE 7-25

NUMBER OF BIRTHS TO UNWED MOTHERS AND BIRTHS RATIOS[1] BY RACE,[2] ARIZONA, 1970-1988

	All Live Births					Live Births to Unwed Mothers					Ratios of Birth to Unwed Mothers				
Year	All Ethnic Groups	White	Black	Native American	Other Race	All Ethnic Groups	White	Black	Native American	Other Race	All Ethnic Groups	White	Black	Native American	Other Race
1970	37,591	32,150	1,378	3,851	212	4,064	2,537	518	1,003	6	10.8	7.9	37.6	26.0	2.8
1971	38,521	32,938	1,408	3,935	240	4,258	2,648	582	1,025	3	11.1	8.0	41.3	26.1	1.3
1972	37,501	31,925	1,399	3,921	256	4,313	2,582	605	1,124	2	11.5	8.1	43.2	28.7	0.8
1973	38,025	32,389	1,425	3,900	311	4,516	2,784	591	1,134	7	11.9	8.6	41.5	29.1	2.3
1974	39,906	34,200	1,389	3,912	405	5,043	3,162	606	1,272	3	12.6	9.3	43.6	32.5	0.7
1975	39,543	33,868	1,309	3,987	379	5,385	3,414	575	1,391	5	13.6	10.0	43.9	34.9	1.3
1976	40,028	34,129	1,300	4,181	418	5,720	3,592	583	1,537	8	14.3	10.5	44.9	36.8	1.9
1977	41,827	35,948	1,254	4,173	452	6,243	4,025	583	1,621	14	14.9	11.2	46.5	38.8	3.1
1978	43,058	36,839	1,458	4,331	430	7,045	4,590	707	1,737	11	16.4	12.5	48.5	40.1	2.6
1979	46,549	39,420	1,971	4,583	575	8,097	5,125	946	1,990	36	17.4	13.0	48.0	43.4	6.3
1980	50,049	43,092	1,634	4,796	527	9,373	6,307	832	2,213	21	18.7	14.6	50.9	46.1	4.0
1981	51,620	44,391	1,759	4,878	592	10,009	6,573	1,071	2,324	41	19.4	14.8	60.9	47.6	6.9
1982	52,628	45,049	1,800	5,137	642	10,798	7,337	940	2,489	32	20.5	16.3	52.2	48.5	5.0
1983	52,919	45,141	1,820	5,297	661	11,704	7,999	954	2,711	40	22.1	17.7	52.4	51.2	6.1
1984	55,109	47,250	1,911	5,265	683	12,832	8,999	1,048	2,736	49	23.3	19.0	54.8	52.0	7.2
1985	59,344	51,034	1,969	5,478	863	14,158	10,172	1,080	2,842	64	23.9	19.9	54.9	51.9	7.4
1986	60,822	52,088	2,157	5,718	859	15,600	11,168	1,186	3,158	88	25.6	21.4	55.0	55.2	10.2
1987	63,320	54,018	2,289	6,036	977	17,161	12,369	1,307	3,389	96	27.1	22.9	57.1	56.1	9.8
1988	65,544	55,773	2,406	6,240	1,052	18,716	13,625	1,392	3,561	138	28.6	24.4	57.9	57.1	13.1

[1] Ratio per 100 births in specific group.

[2] Each race includes births to unwed mothers who indicated Hispanic origin on certificate.

TABLE 7-26

BIRTHS TO UNWED MOTHERS BY MOTHER'S COUNTY OF RESIDENCE AND AGE GROUP
Arizona, 1988

County of Residence	ALL AGES Number	ALL AGES Ratio[1]	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40 +
ARIZONA	18,716		157	2,635	3,357	6,433	3,769	1,679	576	110
Ratio		**28.6**	**98.1**	**79.8**	**60.1**	**33.2**	**18.4**	**14.1**	**14.2**	**17.2**
Apache	936	**49.5**	6	108	134	299	216	118	50	5
Cochise	377	**23.0**	3	50	74	138	63	38	9	2
Coconino	699	**35.6**	4	72	110	252	154	78	20	9
Gila	259	**39.3**	-	38	43	93	48	26	10	1
Graham	119	**28.5**	2	18	24	49	18	6	2	-
Greenlee	24	**21.6**	-	7	4	8	3	2	-	-
La Paz	43	**20.1**	-	3	14	16	8	2	-	-
Maricopa	10,222	**26.8**	92	1,490	1,858	3,496	2,066	890	278	52
Mohave	291	**23.8**	1	38	53	106	56	32	5	-
Navajo	818	**41.8**	6	112	123	289	181	74	27	6
Pima	3,168	**28.2**	22	399	590	1,119	635	272	110	21
Pinal	845	**40.4**	14	177	140	293	136	57	21	7
Santa Cruz	170	**25.6**	2	25	32	33	37	26	13	2
Yavapai	283	**22.0**	1	37	60	89	55	21	17	3
Yuma	462	**22.1**	4	61	98	153	93	37	14	2

[1] Number of births to unmarried women per 100 live births in specified group.

TABLE 7-27

BIRTHS TO UNWED MOTHERS BY MOTHER'S COUNTY OF RESIDENCE, RACE AND EDUCATION
ARIZONA, 1988

	ETHNIC GROUP					EDUCATION				
County of Residence	Total	White	Native American	Black	Other	Elementary[1]	High School	College	Advanced Degree	Not Stated
ARIZONA	18,716	13,625	3,561	1,392	138	2,240	13,381	2,655	104	336
Ratio[2]	**28.6**	**24.4**	**57.1**	**57.9**	**12.3**	**49.5**	**36.0**	**13.0**	**3.9**	**41.0**
Apache	936	45	887	2	2	46	691	153	7	39
Cochise	377	336	4	32	5	33	261	49	-	34
Coconino	699	182	504	13	-	43	531	117	8	-
Gila	259	150	107	1	1	8	226	22	1	2
Graham	119	87	31	1	-	12	81	25	-	1
Greenlee	24	23	1	-	-	1	21	2	-	-
La Paz	43	30	13	-	-	4	36	1	-	2
Maricopa	10,222	8,407	675	1,047	93	1,427	7,079	1,472	56	188
Mohave	291	266	23	1	1	20	233	38	-	-
Navajo	818	117	696	5	-	56	643	93	-	26
Pima	3,168	2,558	383	196	31	294	2,333	497	25	19
Pinal	845	576	203	65	1	143	616	62	2	22
Santa Cruz	170	169	-	1	-	36	111	23	-	-
Yavapai	283	261	20	1	1	23	216	39	4	1
Yuma	462	418	14	27	3	94	303	62	1	2

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[1] Eight grades or less

[2] Number of births to unmarried women per 100 live births in specified group.

TABLE 7-28

NUMBER OF BIRTHS AND RATIOS[1] OF BIRTH TO UNWED MOTHERS BY AGE GROUP AND RACE, ARIZONA, 1988

	NUMBER OF BIRTHS TO UNWED MOTHERS						RATIOS OF BIRTHS TO UNWED MOTHERS					
Mother's Age Group	Non-Hispanic White	Hispanic	Black	Native American	Other	Total	Non-Hispanic White	Hispanic	Black	Native American	Other	Total
Under 15	32	69	18	36	2	157	100.0	97.2	100.0	97.3	100.0	98.1
15-19	2,437	2,087	482	943	43	5,992	58.7	68.9	90.3	85.2	66.2	67.5
20-24	2,406	2,269	481	1,239	38	6,433	21.9	41.9	60.9	63.1	16.4	33.2
25-29	1,507	1,154	273	806	29	3,769	11.2	26.4	42.6	48.0	7.2	18.4
30-34	696	495	112	363	13	1,679	8.5	22.9	34.6	38.3	4.2	14.1
35-39	217	175	25	150	9	576	8.1	22.9	27.8	35.3	9.4	14.2
40+	44	37	1	24	4	110	11.6	24.3	11.1	30.4	17.4	17.1
ALL AGES	7,339	6,286	1,392	3,561	138	18,716	18.4	39.4	57.9	57.1	12.3	28.6

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[1] Births to unwed mothers per 100 births in specified group.

TABLE 7-29

NUMBER OF LOW BIRTHWEIGHT BIRTHS BY MOTHER'S MARITAL STATUS[2], AGE GROUP AND ETHNIC GROUP, ARIZONA, 1988

	MARRIED						UNMARRIED					
Mother's Age Group	Non-Hispanic White	Hispanic	Black	Native American	Other	Total	Non-Hispanic White	Hispanic	Black	Native American	Other	Total
Under 15	0	0	0	0	0	0	5	8	3	3	0	19
15-17	30	14	0	4	1	49	80	89	25	28	3	225
18-19	91	49	1	7	0	148	98	80	35	28	1	242
20-24	403	179	31	26	12	651	208	166	71	57	2	504
25-29	621	140	42	43	19	865	138	70	63	47	3	321
30-34	404	97	32	32	18	583	78	42	13	26	0	159
35-39	139	42	10	12	5	208	25	20	5	13	3	66
40+	24	9	0	7	1	41	11	1	0	3	0	15
Total	1,712	530	116	131	56	2,545	643	476	215	205	12	1,551

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[1] Excludes records with unspecified marital status.

TABLE 7-30

BIRTH RATIOS[1] OF LOW BIRTHWEIGHT BABIES BY MOTHER'S MARITAL STATUS, AGE GROUP AND ETHNIC GROUP, ARIZONA, 1988

	MARRIED						UNMARRIED					
Mother's Age Group	Non-Hispanic White	Hispanic	Black	Native American	Other	Total	Non-Hispanic White	Hispanic	Black	Native American	Other	Total
Under 15	-	-	-	-	-	-	15.6	11.6	16.7	8.3	-	12.1
15-17	8.2	5.9	-	11.8	25.0	7.5	8.1	9.2	10.8	6.5	16.7	8.5
18-19	6.8	7.1	2.4	6.0	-	6.7	6.8	7.1	13.9	5.5	4.0	7.2
20-24	4.7	5.7	10.1	3.7	6.3	5.1	8.6	7.3	14.8	4.6	5.3	7.8
25-29	5.2	4.4	11.4	5.0	5.1	5.2	9.2	6.1	23.1	5.8	10.3	8.5
30-34	5.4	5.8	15.2	5.5	6.2	5.7	11.2	8.5	11.6	7.2	-	9.5
35-39	5.6	7.1	15.4	4.4	5.9	6.0	11.5	11.4	20.0	8.7	33.3	11.5
40+	7.2	7.8	-	12.7	5.6	7.8	25.0	2.7	-	12.5	-	12.5
Total	5.3	5.5	11.5	5.0	5.7	5.5	8.8	7.6	15.4	5.8	8.7	8.3

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[1] Number of low birthweight births per 100 live births in specified group.

TABLE 7-31

LIVE BIRTHS BY MOTHER'S AGE AND FATHER'S AGE, ARIZONA, 1988

	Mother 's Age								
Father's Age:	<15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Total
<15	1	2	0	0	0	0	0	0	0	3
15-17	9	215	95	38	1	0	0	0	0	358
18-19	10	460	603	328	28	1	0	0	0	1,430
20-24	11	543	1,908	6,640	1,361	215	32	5	0	10,715
25-29	1	96	443	5,884	8,770	1,576	231	26	0	17,027
30-34	0	27	107	1,391	5,710	5,320	784	56	1	13,396
35-39	0	5	31	334	1,401	2,734	1,562	119	0	6,186
40-44	0	0	11	132	417	674	734	220	5	2,193
45+	0	0	5	52	165	261	303	120	9	916
Unknown	128	1,952	2,380	4,573	2,660	1,131	416	76	5	13,320
Total	160	3,300	5,583	19,372	20,513	11,912	4,062	622	20	65,544

TABLE 7-32

LIVE BIRTHS BY MOTHER'S ETHNIC GROUP AND FATHER'S ETHNIC GROUP, ARIZONA, 1988

	Mother's Ethnic Group:					
Father's Ethnic Group	White	Hispanic	Black	Native American	Other	Total
White	33,285	1,895	87	246	345	35,858
Hispanic	2,487	11,366	67	484	33	14,437
Black	383	184	1,549	77	25	2,218
Native American	240	136	6	3,939	9	4,330
Other	3,426	2,371	697	1,494	713	8,701
Total	39,821	15,952	2,406	6,240	1,125	65,544

TABLE 7-33

LIVE BIRTHS BY MOTHER'S AND FATHER'S EDUCATION, ARIZONA, 1988

Years of School Completed by Father	Years of School Completed by Mother:					
	≤ 8	9-12	13-16	17+	Unknown	Total
≤ 8	1,494	1,420	141	6	13	3,074
9-12	1,291	21,390	4,595	190	37	27,503
13-16	181	5,979	11,658	939	18	18,775
17+	18	504	2,635	1,471	4	4,632
Unknown	1,541	7,844	1,389	38	748	11,560
Total	4,525	37,137	20,418	2,644	820	65,544

TABLE 7-34

BIRTHS WITH CONGENITAL ANOMALIES MENTIONED ON BIRTH CERTIFICATE BY COUNTY OF RESIDENCE, ARIZONA, 1988

Congenital Anomalies	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL	504	23	12	19	4	11	3	1	257	38	29	80	13	5	2	7
Rate per 1,000 Births	7.7	12.2	7.3	9.7	6.1	26.3	27.0	4.7	6.7	31.0	14.8	7.1	6.2	7.5	1.6	3.3
Anencephalus and Similar Anomalies	7	1	0	0	0	0	0	0	4	0	0	2	0	0	0	0
Spina Bifida	9	0	0	0	0	0	0	0	5	0	1	1	1	1	0	0
Other Congenital Anomalies of Nervous System	14	0	1	0	0	0	0	0	9	0	1	2	0	0	0	1
Congenital Anomalies of Eye	3	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0
Congenital Anomalies of Ear, Face, and Neck	11	3	0	1	0	0	0	0	3	3	0	0	1	0	0	0
Bulbus Cordis Anomalies and Anomalies of Cardial Septal Closure	16	1	0	5	0	0	0	0	7	1	0	1	1	0	0	0
Other Congenital Anomalies of Heart	23	0	0	1	2	0	0	0	14	0	0	4	0	1	0	1
Other Congenital Anomalies of Circulatory System	12	3	0	0	0	0	0	0	5	1	1	1	1	0	0	0
Congenital Anomalies of Respiratory System	3	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0
Cleft Palate and Cleft Lip	49	2	2	3	0	2	0	0	22	2	4	7	3	1	0	1
Other Congenital Anomalies of Upper Alimentary Tract	9	0	2	1	0	0	0	0	4	1	1	0	0	0	0	0
Other Congenital Anomalies of Digestive System	12	0	0	0	0	1	0	0	6	0	0	4	0	0	0	1
Congenital Anomalies of Genital Organs	41	0	0	1	0	0	0	0	30	2	1	6	0	0	0	1
Congenital Anomalies of Urinary System	17	0	1	1	0	0	0	0	8	0	0	5	1	1	0	0
Certain Congenital Musculoskeletal Deformities	50	6	1	2	0	0	0	0	22	5	6	4	2	1	0	1
Other Congenital Anomalies of Limbs	65	2	2	3	0	2	1	0	32	5	4	11	1	0	2	0
Other Congenital Musculoskeletal Anomalies	26	1	0	0	0	1	1	0	16	3	1	3	0	0	0	0
Congenital Anomalies of the Integument	45	2	1	0	1	3	0	1	24	9	3	1	0	0	0	0
Chromosomal Anomalies	29	1	1	1	1	1	1	0	9	0	1	13	0	0	0	0
Other and Unspecified Anomalies	63	1	1	0	0	1	0	0	34	6	5	12	2	0	0	1

TABLE 7-35

BIRTHS WITH CONGENITAL ANOMALIES MENTIONED ON BIRTH CERTIFICATE BY ETHNIC GROUP[1] AND SEX OF CHILD, ARIZONA, 1988

Congenital Anomalies	All Ethnic Groups	White	Non-White	White		Native Americans			Black			Other Race		
				M	F	T	M	F	T	M	F	T	M	F
Total Births	65,544	55,209	10,335	28,327	26,882	6,163	3,120	3,043	3,075	1,558	1,517	1,097	568	529
Total Births with Anomalies Mentioned	504	397	107	217	180	71	35	36	26	20	6	9	7	2
Rate per 1,000 Births	7.7	7.2	10.4	7.7	6.7	11.5	11.2	11.8	8.5	12.8	4.0	8.2	12.3	3.8
Anencephalus and Similar Anomalies	7	3	4	0	3	2	0	2	1	0	1	1	1	0
Spina Bifida	9	7	2	4	3	1	1	0	1	0	1	0	0	0
Other Congenital Anomalies of Nervous System	14	12	2	6	6	1	1	0	0	0	0	1	1	0
Congenital Anomalies of Eye	3	3	0	0	3	0	0	0	0	0	0	0	0	0
Congenital Anomalies of Ear, Face, and Neck	11	8	3	3	5	3	2	1	0	0	0	0	0	0
Bulbus Cordis Anomalies and Anomalies of Cardiac Septal Closure	16	9	7	3	6	7	6	1	0	0	0	0	0	0
Other Congenital Anomalies of Heart	23	21	2	12	9	0	0	0	2	2	0	0	0	0
Other Congenital Anomalies of Circulatory System	12	7	5[2]	3	4	3	0	3	1	0	1	0	0	0
Congenital Anomalies of Respiratory System	3	3	0	3	0	0	0	0	0	0	0	0	0	0
Cleft Palate and Cleft Lip	49	37	12	20	17	12	6	6	0	0	0	0	0	0
Other Congenital Anomalies of Upper Alimentary Tract	9	6	3	4	2	1	0	1	2	2	0	0	0	0
Other Congenital Anomalies of Digestive System	12	8	4	8	0	0	0	0	4	4	0	0	0	0
Congenital Anomalies of Genital Organs	41	37	4	33	4	1	0	1	2	2	0	1	1	0
Congenital Anomalies of Urinary System	17	15	2	10	5	1	1	0	1	1	0	0	0	0
Certain Congenital Musculoskeletal Deformities	50	33	17	16	17	14	8	6	2	2	0	1	0	1
Other Congenital Anomalies of Limbs	65	52	13	21	31	10	3	7	3	1	2	0	0	0
Other Congenital Musculoskeletal Anomalies	26	24	2	12	12	1	0	1	1	1	0	0	0	0
Congenital Anomalies of the Integument	45	35	10	17	18	6	1	5	1	0	1	3	2	1
Chromosomal Anomalies	29	26	3	15	11	2	1	1	1	1	0	0	0	0
Other and Unspecified Congenital Anomalies	63	51	12	27	24	6	5	1	4	4	0	2	2	0

[1] Each race includes births of Hispanic parentage.

[2] Includes one record with unspecified ethnic group.

TABLE 7-36

RATES[1] OF BIRTHS WITH CONGENITAL ANOMALIES BY ETHNIC GROUP AND SEX OF CHILD, ARIZONA, 1971 - 1988

	ALL ETHNIC GROUPS	Births With congenital anomalies				White		Native Americans			Black			Other race		
YEAR	All births	Number	Rate	White	Non White	M	F	T	M	F	T	M	F	T	M	F
1971	38,521	704	18.3	16.9	25.8	20.0	13.6	26.9	31.5	22.2	22.6	25.4	19.5	28.9	40.3	15.6
1972	37,501	483	12.9	12.1	17.0	14.0	10.2	18.5	20.2	16.6	13.8	16.8	10.5	13.6	24.0	-
1973	38,025	492	12.9	11.4	21.2	12.6	10.1	25.0	26.8	23.2	11.5	10.5	12.6	23.7	24.2	23.2
1974	39,906	614	15.4	14.2	21.6	15.3	13.1	26.1	25.6	26.7	13.3	16.1	10.7	11.6	8.7	14.9
1975	39,543	508	12.8	11.9	18.2	12.8	10.9	21.9	19.3	24.3	10.8	13.6	7.9	9.3	18.4	-
1976	40,028	501	12.5	11.2	19.5	12.7	9.6	21.3	22.7	19.9	16.6	14.9	18.1	13.2	12.6	13.9
1977	41,827	460	11.0	10.3	14.8	11.0	9.6	16.7	21.8	11.1	12.6	13.1	12.1	5.9	7.1	4.5
1978	43,058	512	11.9	11.5	14.1	12.6	10.3	15.5	13.7	17.7	12.4	15.4	9.0	7.9	8.0	7.9
1979	46,549	407	8.7	8.2	11.6	9.7	6.6	11.8	12.0	11.6	11.7	13.8	9.4	10.4	3.2	18.9
1980	50,049	436	8.7	8.4	10.2	10.8	6.0	10.9	12.0	9.7	9.2	10.3	8.0	8.1	9.5	6.6
1981	51,620	451	8.7	8.3	11.0	9.3	7.2	12.8	10.7	18.6	4.5	3.5	5.7	4.4	9.1	-
1982	52,628	459	8.7	8.5	10.1	9.2	7.7	12.1	13.7	10.5	6.5	8.3	4.6	6.6	5.4	7.7
1983	52,919	463	8.7	8.0	12.5	8.9	7.0	13.8	19.2	10.2	9.8	10.8	8.8	11.5	15.6	7.5
1984	55,109	485	8.8	8.0	12.9	8.3	7.7	16.3	16.3	16.2	7.3	8.8	2.8	6.2	4.7	7.9
1985	59,344	511	8.6	7.8	13.0	8.5	6.6	16.4	16.5	16.4	7.1	9.6	4.7	7.7	11.1	4.0
1986	60,822	482	7.9	7.0	13.0	8.0	5.9	16.4	13.6	19.3	8.1	9.8	6.1	6.0	4.7	7.5
1987	63,320	520	8.2	7.9	9.8	8.9	6.9	12.2	15.3	9.1	6.2	8.2	4.2	4.2	4.1	4.3
1988	65,544	504	7.7	7.2	10.4	7.7	6.7	11.5	11.2	11.8	8.5	12.8	4.0	8.2	12.3	3.8

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[1] Rates per 1,000 live births in specific group.

MATERNAL, PERINATAL AND INFANT MORTALITY STATISTICS

TABLE 8-1

MATERNAL DEATHS[1] BY AGE GROUP AND MATERNAL MORTALITY RATES,[2] ARIZONA AND UNITED STATES, 1980-1988

Year	Total Number of Deaths	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Arizona Rate	U.S. Rate
1980	4	0	1	1	0	1	1	0	0	8.0	9.2
1981	4	0	1	1	1	0	0	1	0	7.7	9.3
1982	4	0	0	1	1	0	1	1	0	7.6	8.9
1983	3	0	1	1	0	0	1	0	0	5.7	8.0
1984	4	0	0	0	2	1	1	0	0	7.3	7.8
1985	1	0	0	0	0	1	0	0	0	1.7	7.8
1986	1	0	1	0	0	0	0	0	0	1.6	6.7[#]
1987	1	0	0	0	1	0	0	0	0	1.6	6.3[#]
1988	4	0	1	2	0	1	0	0	0	6.1	NA

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[1] Maternal deaths are those assigned to complications of pregnancy, childbirth and puerperium, category numbers 630-676 of the Ninth Revision. International Classification of Diseases, 1975.

[2] Rates per 100,000 live births

[#] Preliminary

TABLE 8-2

PERINATAL DEATHS[1] AND PERINATAL MORTALITY RATES BY COUNTY OF MOTHER'S RESIDENCE, ARIZONA, 1988

County	Early infant deaths		Late fetal deaths		Total perinatal deaths	
	Number	Rate	Number	Rate	Number	Rate
ARIZONA	312	4.8	419	6.4	731	11.2
Apache	4	2.1	9	4.8	13	6.9
Cochise	7	4.3	14	8.6	21	12.8
Coconino	12	6.1	17	8.7	29	14.8
Gila	4	6.1	4	6.1	8	12.2
Graham	1	2.4	2	4.8	3	7.2
Greenlee	2	18.0	3	27.0	5	45.0
La Paz	1	4.7	2	9.4	3	14.0
Maricopa	197	5.2	247	6.5	444	11.7
Mohave	5	4.1	7	5.7	12	9.8
Navajo	5	2.6	15	7.7	20	10.2
Pima	51	4.6	60	5.4	111	9.9
Pinal	9	4.3	21	10.0	30	14.3
Santa Cruz	3	4.5	2	3.0	5	7.5
Yavapai	6	4.7	6	4.7	12	9.3
Yuma	5	2.4	10	4.8	15	7.2

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[1] Perinatal mortality refers to fetal deaths of 20 weeks or more of uterogestation combined with deaths that occurred before the seventh day of life. Rates per 1,000 live births in specified group.

TABLE 8-3

FETAL DEATHS OCCURRING IN ARIZONA BY COUNTY OF OCCURRENCE,[1] ARIZONA, 1980-1988

County	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	428	394	434	393	371	432	391	433	430
Apache	6	16	12	14	13	10	13	15	8
Cochise	10	13	12	7	9	10	8	10	11
Coconino	16	17	22	25	18	22	12	10	19
Gila	3	8	3	7	5	2	4	2	3
Graham	2	3	2	4	3	1	5	3	2
Greenlee	2	1	2	1	-	-	-	1	0
La Paz	NA	NA	NA	1	-	-	-	1	0
Maricopa	229	198	225	190	211	232	225	269	271
Mohave	5	3	4	8	10	10	11	10	8
Navajo	5	11	11	10	10	14	6	9	8
Pima	113	97	115	89	70	91	83	73	72
Pinal	9	10	6	7	7	4	7	7	6
Santa Cruz	3	4	1	3	3	-	-	3	1
Yavapai	8	2	9	7	5	11	6	5	7
Yuma	17	11	10	20	7	15	11	15	14

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[1] Resident and non-resident fetal deaths occurring in Arizona.

TABLE 8-4

FETAL MORTALITY BY COUNTY OF RESIDENCE OF MOTHER, ARIZONA, SELECTED YEARS, 1950-1988

County of Residence	1950	1960	1970	1975	1980[1]	1985	1986	1987	1988
ARIZONA	381	463	385	351	428	415	381	422	419
Apache	13	14	14	9	6	11	15	15	9
Cochise	8	29	26	19	10	12	10	11	14
Coconino	13	20	9	12	16	24	7	14	17
Gila	18	10	12	8	3	3	6	2	4
Graham	4	5	2	6	2	2	4	2	2
Greenlee	7	4	3	4	2	2	1	2	3
La Paz	NA	NA	NA	NA	NA	2	1	2	2
Maricopa	175	228	200	166	229	217	208	242	247
Mohave	2	4	4	5	5	8	9	10	7
Navajo	11	21	9	20	5	20	8	13	15
Pima	68	77	69	54	113	72	76	68	60
Pinal	27	28	12	25	9	12	19	13	21
Santa Cruz	6	4	3	8	3	5	1	4	2
Yavapai	14	6	8	3	8	12	7	8	6
Yuma	15	13	14	12	17	13	9	16	10

[1] Data for 1980 refer to fetal deaths occurring in Arizona by county of occurrence.

TABLE 8-5

FETAL MORTALITY RATES[1] BY COUNTY OF RESIDENCE OF MOTHER, ARIZONA, SELECTED YEARS, 1950-88

County	1950	1960	1970	1975	1980	1985	1986	1987	1988
ARIZONA	18.6	12.6	10.2	8.9	8.5	7.0	6.3	6.7	6.4
Apache	17.1	9.5	10.2	6.3	4.9	5.9	8.5	8.1	4.8
Cochise	10.5	17.6	19.2	12.6	6.6	7.7	6.6	6.8	8.6
Coconino	16.9	13.8	6.4	8.1	7.1	12.3	3.8	7.0	8.7
Gila	25.1	13.4	17.3	12.0	5.2	4.7	9.6	3.5	6.1
Graham	10.4	15.0	5.4	14.2	5.0	4.9	10.1	4.5	4.8
Greenlee	15.9	15.7	12.9	13.5	6.5	12.4	9.4	16.1	27.0
La Paz[2]	NA	NA	NA	NA	NA	8.5	4.7	10.1	9.4
Maricopa	19.9	12.8	10.2	8.3	8.2	6.4	5.9	6.6	6.5
Mohave	8.7	21.7	8.6	9.2	5.8	8.3	8.5	8.5	5.7
Navajo	12.3	14.6	6.1	12.3	4.2	10.6	4.2	6.6	7.7
Pima	17.6	10.8	10.2	7.4	11.4	6.7	7.3	6.2	5.4
Pinal	19.2	14.4	7.7	14.6	9.8	5.9	9.3	6.1	10.0
Santa Cruz	24.0	11.6	10.1	22.2	9.7	9.6	2.0	7.3	3.0
Yavapai	28.5	9.5	14.7	4.8	9.5	11.0	6.2	6.8	4.7
Yuma	20.5	10.2	10.1	7.5	10.2	6.6	4.6	8.1	4.8

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[1] Per 1,000 live births.

[2] La Paz County included in Yuma County until January 1, 1983.

TABLE 8-6

FETAL MORTALITY BY COUNTY OF RESIDENCE OF MOTHER, RACE[1] AND SEX OF CHILD, ARIZONA, 1988

	Total Fetal Deaths			White		Native Americans			Black			Other		
County of Residence	All	White	Non-White	M	F	T	M	F	T	M	F	T	M	F
TOTAL	419	338	81	170	168	40	20	20	31	12	19	10	7	3
Rate[2]	6.4	6.1	7.8	6.0	6.3	6.5	6.4	6.6	10.1	7.7	12.5	9.1	12.3	5.7
Apache	9	1	8	0	1	8	3	5	0	0	0	0	0	0
Cochise	14	12	2	7	5	0	0	0	1	0	1	1	1	0
Coconino	17	12	5	5	7	4	2	2	1	0	1	0	0	0
Gila	4	3	1	1	2	1	0	1	0	0	0	0	0	0
Graham	2	1	1	0	1	1	0	1	0	0	0	0	0	0
Greenlee	3	2	1	1	1	1	0	1	0	0	0	0	0	0
La Paz	2	2	0	1	1	0	0	0	0	0	0	0	0	0
Maricopa	247	213	34	108	105	8	5	3	18	6	12	8	5	3
Mohave	7	6	1	5	1	1	0	1	0	0	0	0	0	0
Navajo	15	8	7	5	3	7	4	3	0	0	0	0	0	0
Pima	60	48	12	24	24	4	4	0	7	5	2	1	1	0
Pinal	21	15	6	7	8	5	2	3	1	0	1	0	0	0
Santa Cruz	2	2	0	1	1	0	0	0	0	0	0	0	0	0
Yavapai	6	6	0	2	4	0	0	0	0	0	0	0	0	0
Yuma	10	7	3	3	4	0	0	0	3	1	2	0	0	0

[1] Each race includes records with indicated Hispanic origin.
[2] Number of fetal deaths per 1,000 live births in specified group.

TABLE 8-7

FETAL MORTALITY BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE, ARIZONA, 1988

		AGE GROUP									
	Total	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Unknown
Arizona	419	1	22	37	111	126	68	47	5	0	2
Rate[1]	6.4	6.3	6.7	6.6	5.7	6.1	5.7	11.6	8.0	0	0
Apache	9	0	0	1	2	1	1	2	0	0	0
Cochise	14	0	0	1	5	3	3	1	1	0	0
Coconino	17	0	2	2	4	5	2	2	0	0	0
Gila	4	0	1	0	1	2	0	0	0	0	0
Graham	2	0	0	0	1	0	1	0	0	0	0
Greenlee	3	0	0	1	1	1	0	0	0	0	0
La Paz	2	0	0	1	0	0	0	1	0	0	0
Maricopa	247	1	11	22	60	87	38	27	0	0	0
Mohave	7	0	0	0	3	2	1	0	1	0	0
Navajo	15	0	1	4	4	1	2	3	0	0	0
Pima	60	0	6	4	17	17	8	7	1	0	0
Pinal	21	0	1	0	7	5	4	3	1	0	0
Santa Cruz	2	0	0	0	1	0	0	0	0	0	1
Yavapai	6	0	0	0	2	1	2	0	1	0	0
Yuma	10	0	0	1	2	1	4	1	0	0	1

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[1] Rates per 1,000 live births in specific group.

TABLE 8-9

INFANT MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, 1950-88

County of Residence	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	937	1,165	670	587	619	600	491	509	525	572	569	598	634
Apache	81	82	36	27	23	25	21	20	25	22	16	16	10
Cochise	26	44	19	24	19	22	14	20	23	15	8	11	14
Coconino	47	67	39	32	20	20	16	22	16	21	18	15	22
Gila	35	35	11	11	12	5	13	5	3	5	8	3	7
Graham	22	15	9	8	8	14	4	3	7	4	5	4	3
Greenlee	15	7	9	7	5	1	5	-	2	3	1	-	2
La Paz	NA	NA	NA	NA	NA	NA	NA	8	1	6	-	1	2
Maricopa	328	478	305	289	358	333	265	266	272	319	340	368	382
Mohave	11	4	3	6	18	8	11	9	8	7	11	10	15
Navajo	96	93	43	33	27	29	18	23	18	26	12	31	21
Pima	111	195	120	81	72	84	76	88	96	94	94	84	104
Pinal	97	75	36	31	17	17	19	17	27	18	27	19	15
Santa Cruz	12	9	5	5	3	5	3	3	4	4	4	7	8
Yavapai	19	19	8	8	11	15	10	11	11	9	13	11	13
Yuma	37	42	27	25	26	22	16	14	12	19	12	18	16

TABLE 8-9

INFANT MORTALITY RATES[1] BY AGE AND SELECTED CAUSES, ARIZONA, UNITED STATES, 1988

Age and Cause of Death	International Classification of Diseases, Ninth Revision	Arizona Number	Arizona Rate	U.S. Rate[2]
Total - Under 1 Year		634	967.3	992.9
Under 28 Days		384	585.9	641.7
28 Days to 364 Days		250	381.4	351.5
Certain Gastrointestinal Diseases	008-009,535,555-558	1	1.5	4.4
Pneumonia and Influenza	480-487	11	16.8	14.4
Congenital Anomalies	740-759	156	238.0	207.2
Disorders Relating to Short Gestation and Unspecified Low-Birthweight	765	77	117.5	90.9
Birth Trauma	767	5	7.6	4.6
Intrauterine Hypoxia and Birth Asphyxia	768	10	15.3	20.3
Respiratory Distress Syndrome	769	34	51.9	80.4
Other Conditions Originating in the Perinatal Period	760-764,766,770-779	130	198.3	273.2
Sudden Infant Death Syndrome	798.0	118	180.0	117.4
ALL OTHER CAUSES	RESIDUAL	92	140.4	179.7

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[1] Per 100,000 live births

[2] Provisional

TABLE 8-10

INFANT MORTALITY BY COUNTY OF RESIDENCE, RACE[1] AND GENDER, ARIZONA, 1988

County of	All Deaths			White			Non-White			Native Americans			Black			Other		
Residence	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	634	352	282	514	289	225	120	63	57	61	30	31	55	30	25	4	3	1
Apache	10	4	6	1	0	1	9	4	5	9	4	5	0	0	0	0	0	0
Cochise	14	8	6	13	7	6	1	1	0	0	0	0	1	1	0	0	0	0
Coconino	22	14	8	12	7	5	10	7	3	8	5	3	2	2	0	0	0	0
Gila	7	3	4	5	3	2	2	0	2	2	0	2	0	0	0	0	0	0
Graham	3	2	1	2	1	1	1	1	0	1	1	0	0	0	0	0	0	0
Greenlee	2	1	1	1	1	0	1	0	1	1	0	1	0	0	0	0	0	0
La Paz	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Maricopa	382	202	180	323	169	154	59	33	26	12	6	6	44	24	20	3	3	0
Mohave	15	8	7	15	8	7	0	0	0	0	0	0	0	0	0	0	0	0
Navajo	21	13	8	4	3	1	17	10	7	15	8	7	2	2	0	0	0	0
Pima	104	63	41	91	60	31	13	3	10	9	3	6	3	0	3	1	0	1
Pinal	15	9	6	9	5	4	6	4	2	3	3	0	3	1	2	0	0	0
Santa Cruz	8	6	2	8	6	2	0	0	0	0	0	0	0	0	0	0	0	0
Yavapai	13	8	5	13	8	5	0	0	0	0	0	0	0	0	0	0	0	0
Yuma	16	10	6	15	10	5	1	0	1	1	0	1	0	0	0	0	0	0

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[1] Each race includes records with indicated Hispanic origin. Compare Table 8-11.

TABLE 8-11

HISPANIC INFANTS MORTALITY BY COUNTY OF RESIDENCE, RACE AND GENDER, ARIZONA, 1988

County of Residence	All Deaths			White			Non-White			Native Americans			Black		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	186	105	81	181	101	80	5	4	1	4	3	1	1	1	0
Apache	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cochise	6	4	2	6	4	2	0	0	0	0	0	0	0	0	0
Coconino	4	2	2	3	1	2	0	0	0	1	1	0	0	0	0
Gila	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenlee	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
La Paz	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maricopa	102	54	48	101	53	48	0	0	0	1	1	0	0	0	0
Mohave	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
Navajo	2	2	0	1	1	0	0	0	0	0	0	0	1	1	0
Pima	43	23	20	42	23	19	0	0	0	1	0	1	0	0	0
Pinal	7	4	3	6	3	3	0	0	0	1	1	0	0	0	0
Santa Cruz	7	5	2	7	5	2	0	0	0	0	0	0	0	0	0
Yavapai	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0
Yuma	10	7	3	10	7	3	0	0	0	0	0	0	0	0	0

TABLE 8-12

INFANT MORTALITY RATES[1] BY COUNTY OF RESIDENCE, ETHNIC GROUP AND GENDER, ARIZONA, 1988

County of Residence	ALL INFANT DEATHS			WHITE[2]			NON-WHITE			HISPANIC			NATIVE AMERICANS			BLACK		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	9.7	10.5	8.8	9.3	10.2	8.4	11.6	12.0	11.2	9.6	10.6	8.5	9.9	9.6	10.2	17.9	19.3	16.5
Apache	5.3	4.2	6.4	3.3	-	6.4	5.7	4.9	6.4	-	-	-	5.7	4.9	6.5	-	-	-
Cochise	8.5	9.4	7.7	9.3	9.5	9.1	4.2	8.6	-	9.6	12.4	6.7	-	-	-	6.4	13.0	-
Coconino	11.2	13.7	8.5	12.0	13.2	10.7	10.3	14.1	6.3	16.3	14.6	18.4	8.8	10.8	6.7	42.6	76.9	-
Gila	10.6	9.7	11.5	11.2	14.2	8.6	9.4	-	17.4	5.8	12.8	-	9.9	-	18.7	-	-	-
Graham	7.2	9.2	5.0	5.7	5.5	5.9	14.7	27.0	-	-	-	-	16.1	30.3	-	-	-	-
Greenlee	18.0	22.7	14.9	9.4	22.7	-	*	-	*	15.4	34.5	-	*	-	-	-	-	-
La Paz	9.3	8.4	10.5	12.7	11.9	13.7	-	-	-	-	-	-	-	-	-	-	-	-
Maricopa	10.0	10.4	9.7	9.4	9.7	9.2	15.2	16.5	13.8	10.0	10.5	9.5	10.8	10.7	10.9	21.3	22.5	20.1
Mohave	12.2	12.6	11.8	12.9	13.3	12.5	-	-	-	8.3	17.0	-	-	-	-	-	-	-
Navajo	10.7	12.9	8.5	6.3	9.0	3.3	12.9	14.8	10.9	13.6	27.0	-	11.6	12.1	11.1	100.0	153.9	-
Pima	9.3	10.8	7.6	9.2	11.6	6.6	10.0	4.5	15.5	9.4	9.7	9.1	17.7	11.7	23.8	5.3	-	10.5
Pinal	7.2	8.6	5.8	5.3	5.9	4.8	14.6	19.9	9.6	7.6	8.7	6.4	9.9	21.3	-	30.0	17.5	46.5
Santa Cruz	12.0	18.0	6.0	12.1	18.1	6.1	-	-	-	11.5	16.2	6.7	-	-	-	-	-	-
Yavapai	10.1	12.3	7.9	10.6	12.8	8.3	-	-	-	10.3	10.8	9.8	-	-	-	-	-	-
Yuma	7.6	9.4	5.8	7.7	9.9	5.3	7.0	-	11.5	8.2	11.2	5.0	37.0	-	63.3	-	-	-

[1] Rate per 1,000 live births in specific group, and calculated only if at least ten births recorded in that group in 1988.

[2] Includes only whites of non-Hispanic origin.

- No infant deaths recorded in 1988.

* Less than ten births recorded in that group in 1988.

TABLE 8-13

NEONATAL MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, 1970-88

County	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	468	381	414	381	305	314	305	348	331	376	384
Apache	17	10	9	12	6	11	9	12	9	5	5
Cochise	16	18	13	15	10	15	13	8	5	10	7
Coconino	26	17	11	11	10	13	5	9	6	7	14
Gila	9	6	8	2	8	2	1	3	5	3	5
Graham	6	4	4	10	2	2	4	2	3	1	2
Greenlee	5	6	2	-	5	-	2	2	1	-	2
La Paz	NA	NA	NA	NA	NA	3	1	4	-	1	2
Maricopa	229	206	260	230	174	167	170	197	204	236	244
Mohave	3	5	10	4	5	4	6	2	4	6	5
Navajo	15	18	15	15	8	9	8	13	4	17	7
Pima	86	47	48	53	47	56	62	68	66	54	65
Pinal	28	18	14	8	8	15	11	7	12	12	9
Santa Cruz	3	4	3	2	2	2	2	4	3	6	3
Yavapai	6	4	4	5	6	7	5	6	5	7	8
Yuma	19	18	13	14	14	8	6	11	4	11	6

TABLE 8-14

NEONATAL MORTALITY RATES[1] BY COUNTY OF RESIDENCE, ARIZONA, UNITED STATES, 1970-88

County	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
U.S.	15.1	11.8	8.4	7.9	7.7	7.3	6.9	6.9	6.7	6.5[2]	6.4[2]
ARIZONA	12.4	9.6	8.3	7.4	5.8	5.9	5.5	5.9	5.4	5.9	5.9
Apache	12.4	6.9	5.5	7.1	3.3	6.2	5.0	6.5	5.1	2.7	2.6
Cochise	11.8	11.9	8.2	9.1	6.4	9.6	8.0	5.1	3.3	6.2	4.3
Coconino	18.5	11.5	6.0	6.3	5.7	7.2	2.8	4.6	3.3	3.5	7.1
Gila	13.0	9.0	11.3	2.6	9.9	2.9	1.5	4.7	8.0	5.3	7.6
Graham	16.2	9.4	7.8	19.6	4.3	4.6	9.0	4.9	7.6	2.3	4.8
Greenlee	21.6	20.2	7.3	-	19.5	-	10.3	12.4	9.4	-	18.0
La Paz	NA	NA	NA	NA	NA	12.7	5.1	17.1	-	5.1	9.3
Maricopa	11.6	10.3	9.7	8.3	6.1	5.8	5.5	5.8	5.8	6.4	6.4
Mohave	6.5	9.1	11.5	4.5	5.6	4.3	6.1	2.1	3.8	5.1	4.1
Navajo	10.1	11.0	7.9	8.3	4.2	4.7	4.3	6.9	2.1	8.6	3.6
Pima	12.8	6.4	5.4	5.8	5.1	5.8	6.4	6.6	6.3	4.9	5.8
Pinal	18.0	10.5	7.6	4.2	4.1	8.0	5.9	3.4	5.8	5.6	4.3
Santa Cruz	10.1	11.0	6.0	3.9	4.1	4.4	3.9	7.6	5.9	11.0	4.5
Yavapai	11.0	6.3	4.3	5.0	5.6	6.8	5.0	5.5	4.4	6.0	6.2
Yuma	13.6	11.1	7.3	7.2	7.4	4.8	3.4	5.6	2.0	5.6	2.9

[1] Per 1,000 live births

[2] Preliminary

TABLE 8-15

NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY BY CHILD'S GENDER AND ETHNIC GROUP, ARIZONA, 1988

	Number of Deaths			Mortality Rates[1]		
Ethnic Group/Gender	Neonatal	Post-Neonatal	Total Infant	Neonatal	Post-Neonatal	Total Infant
White, total[2]	205	129	334	5.6	3.5	9.1
Male	113	75	188	5.9	3.9	9.9
Female	91	54	145	5.1	3.0	8.1
Hispanic, total[3]	107	73	180	5.8	4.0	9.8
Male	54	47	101	5.8	5.1	10.9
Female	54	26	80	6.0	2.9	8.9
Black, total	43	12	55	14.0	3.9	17.9
Male	21	9	30	13.5	5.8	19.3
Female	22	3	25	14.5	2.0	16.5
Native American, total	27	34	61	4.4	5.5	9.9
Male	12	18	30	3.9	5.8	9.7
Female	15	16	31	4.9	5.3	10.2
Other Race, total	2	2	4	1.8	1.8	3.6
Male	2	1	3	3.5	1.8	5.3
Female	0	1	1	-	1.9	1.9
All Ethnic Groups, total	384	250	634	5.9	3.8	9.7
Male	202	150	352	6.0	4.5	10.5
Female	182	100	282	5.7	3.1	8.8

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[1] Number of deaths per 1,000 live births in specified ethnic/gender group. Denominators are from Tables 7-11 and 7-12

[2] Non-Hispanic

[3] For the purpose of this classification, Hispanics are White of Hispanic origin.

DEATH STATISTICS

TABLE 9-1

MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, 1950-1988

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	6,317	10,067	14,857	16,964	21,226	21,318	21,951	22,482	23,785	24,577	25,409	26,670	27,511
Apache	255	266	266	316	302	302	317	294	306	330	335	343	329
Cochise	322	428	511	512	631	628	644	712	664	687	662	764	748
Coconino	161	267	288	278	309	308	339	320	341	379	383	392	404
Gila	245	253	282	284	330	337	417	385	396	381	399	408	413
Graham	112	123	149	174	171	184	164	184	175	169	189	193	197
Greenlee	87	71	77	74	86	52	73	61	66	47	50	67	64
La Paz	NA	NA	NA	NA	NA	NA	NA	140	154	136	128	151	157
Maricopa	2,735	5,011	7,895	9,147	11,769	11,923	12,214	12,433	13,398	13,661	14,106	14,746	15,217
Mohave	90	97	238	406	549	548	612	593	607	753	795	877	972
Navajo	300	273	341	355	415	415	400	406	428	460	484	462	471
Pima	1,051	2,058	3,062	3,511	4,311	4,253	4,279	4,506	4,734	4,865	5,090	5,295	5,362
Pinal	401	474	548	579	731	745	741	782	814	785	942	922	1,019
Santa Cruz	63	78	90	120	121	125	135	131	150	148	147	159	193
Yavapai	267	348	555	647	801	813	878	961	964	1,057	1,032	1,213	1,217
Yuma	228	320	555	561	700	685	738	574	588	719	667	678	748

TABLE 9-2

MORTALITY RATES[1] BY COUNTY OF RESIDENCE, ARIZONA, 1950-1988

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
U.S.	9.6	9.5	9.4	8.5	8.8	8.6	8.5	8.6	8.7	8.7	8.7	8.7[2]	8.8[2]
ARIZONA	8.4	7.7	8.4	7.6	7.8	7.6	7.6	7.7	7.8	7.7	7.6	7.7	7.7
Apache	9.2	8.7	8.2	7.7	5.8	5.8	5.7	5.2	5.9	5.8	5.5	5.5	5.1
Cochise	10.2	7.8	8.3	6.9	7.3	7.1	7.2	7.8	7.3	7.1	6.8	7.6	7.3
Coconino	6.7	6.4	6.0	4.3	4.1	3.8	4.1	3.9	4.1	4.4	4.3	4.3	4.3
Gila	10.1	9.8	9.6	8.7	8.9	8.9	10.9	9.9	10.5	10.0	10.0	10.2	10.2
Graham	8.6	8.8	9.0	8.6	7.5	7.9	6.9	7.6	7.3	7.2	7.7	7.8	8.0
Greenlee	6.8	6.2	7.5	6.2	7.5	4.3	5.6	5.1	5.8	5.4	5.2	7.0	6.7
La Paz	NA	NA	NA	NA	NA	NA	NA	10.8	11.5	9.4	9.1	10.7	11.0
Maricopa	8.2	7.6	8.1	7.5	7.8	7.7	7.6	7.6	7.7	7.6	7.4	7.4	7.4
Mohave	10.6	12.5	9.2	10.9	9.8	9.7	10.7	9.9	9.3	10.4	10.3	11.1	11.9
Navajo	10.2	7.2	7.2	6.1	6.1	6.0	5.6	5.6	6.0	6.4	6.5	6.1	6.1
Pima	7.4	7.7	8.7	8.0	8.1	7.7	7.5	7.7	7.9	7.8	7.9	8.0	7.8
Pinal	9.3	7.6	8.0	6.6	8.0	8.0	7.8	8.1	8.3	7.8	9.1	8.6	9.2
Santa Cruz	6.7	7.2	6.4	6.9	5.9	5.9	6.1	5.9	6.7	5.5	5.3	5.4	6.4
Yavapai	10.7	12.0	15.0	13.2	11.8	11.7	12.2	13.1	11.9	12.0	11.2	12.8	12.4
Yuma	8.1	6.9	9.1	8.0	7.7	7.5	7.8	7.1	6.9	8.0	7.6	7.6	8.2

[1] Per 1,000 estimated mid-year population
[2] Preliminary

TABLE 9-3

MORTALITY BY COUNTY OF OCCURRENCE,[1] ARIZONA, 1950-1988

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
ARIZONA	6,822	10,557	15,259	17,450	22,054	21,925	22,655	23,205	24,598	25,382	26,404	27,628	28,449
Apache	308	315	184	231	240	199	231	212	202	250	254	250	225
Cochise	315	387	474	434	499	483	519	589	556	566	551	589	575
Coconino	183	322	304	326	382	363	392	391	439	469	493	496	479
Gila	240	233	276	254	284	303	355	304	308	299	312	329	317
Graham	102	102	132	145	132	133	117	154	144	141	139	150	162
Greenlee	76	71	63	58	61	40	59	38	42	19	27	2	27
La Paz	NA	NA	NA	NA	NA	NA	NA	118	120	120	132	133	127
Maricopa	2,958	5,318	8,275	9,671	12,671	12,730	13,169	13,450	14,614	14,791	15,345	15,975	16,621
Mohave	95	110	218	377	447	440	474	495	568	642	764	832	877
Navajo	266	224	291	273	303	325	294	290	298	306	382	369	357
Pima	1,251	2,193	3,355	3,940	4,960	4,826	4,847	5,060	5,234	5,413	5,596	5,873	5,959
Pinal	418	453	443	395	484	462	467	485	437	496	573	590	644
Santa Cruz	67	83	92	92	81	87	99	99	111	110	114	112	142
Yavapai	308	429	613	665	786	787	833	870	874	978	977	1,122	1,088
Yuma	235	317	539	589	724	747	799	650	651	782	745	779	849

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[1] Resident and non-resident deaths occurring in Arizona.

TABLE 9-4

RESIDENT MORTALITY BY MONTH OF OCCURRENCE, ARIZONA, 1970-88

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
1970	1,305	1,231	1,273	1,206	1,305	1,189	1,215	1,198	1,155	1,236	1,265	1,279	14,857
Percent	8.8	8.3	8.6	8.1	8.8	8.0	8.0	8.1	7.8	8.3	8.5	8.6	100.0
1980	1,904	1,649	1,835	1,729	1,686	1,663	1,726	1,651	1,646	1,659	1,779	2,299	21,226
Percent	9.0	7.8	8.6	8.1	7.9	7.8	8.1	7.8	7.8	7.8	8.4	10.8	100.0
1981	2,098	1,666	1,856	1,828	1,742	1,642	1,774	1,715	1,612	1,747	1,765	1,873	21,318
Percent	9.8	7.8	8.7	8.6	8.2	7.7	8.3	8.0	7.6	8.2	8.3	8.8	100.0
1982	2,013	1,013	1,948	1,790	1,762	1,687	1,734	1,781	1,727	1,815	1,723	1,958	21,951
Percent	9.2	9.2	8.9	8.2	8.0	7.7	7.9	8.1	7.9	8.3	7.8	8.9	100.0
1983	1,982	1,902	1,979	1,968	1,924	1,677	1,805	1,803	1,765	1,822	1,847	2,008	22,482
Percent	8.8	8.5	8.8	8.8	8.6	7.5	8.0	8.0	7.9	8.1	8.2	8.9	100.0
1984	2,014	1,978	2,244	2,108	2,036	1,865	1,833	1,852	1,737	1,935	2,011	2,172	23,785
Percent	8.5	8.3	9.4	8.9	8.6	7.8	7.7	7.8	7.3	8.1	8.5	9.1	100.0
1985	2,314	2,201	2,110	1,966	2,017	1,956	1,952	1,874	1,919	1,958	2,042	2,268	24,577
Percent	9.4	9.0	8.6	8.0	8.2	8.0	7.9	7.6	7.8	8.0	8.3	9.2	100.0
1986	2,412	2,163	2,283	2,068	2,053	2,061	2,015	2,112	1,942	2,090	1,996	2,214	25,409
Percent	9.5	8.5	9.0	8.1	8.1	8.1	7.9	8.3	7.6	8.2	7.9	8.7	100.0
1987	2,482	2,212	2,363	2,238	2,176	2,120	2,149	2,120	1,996	2,122	2,218	2,475	26,670
Percent	9.3	8.3	8.7	8.4	8.2	7.9	8.1	7.9	7.5	8.0	8.3	9.3	100.0
1988	2,641	2,497	2,457	2,230	2,234	2,173	2,169	2,143	2,040	2,161	2,258	2,508	27,511
Percent	9.6	9.1	8.9	8.1	8.1	7.9	7.9	7.8	7.4	7.9	8.2	9.1	100.0

TABLE 9-5

DEATHS BY MONTH AND DAY OF OCCURRENCE, ARIZONA RESIDENTS, 1988

Day of Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
01	89	83	73	85	72	69	76	65	67	73	95	80
02	94	89	75	90	89	79	82	64	73	70	65	67
03	82	106	78	88	77	68	54	82	62	82	85	68
04	85	90	79	89	56	73	68	71	69	68	78	88
05	76	77	83	81	69	71	72	66	60	77	64	86
06	87	75	69	79	60	70	70	82	72	71	78	87
07	100	85	77	85	75	62	78	69	61	71	73	84
08	98	81	87	90	60	69	73	62	82	79	82	78
09	89	86	72	69	55	88	76	65	69	61	72	76
10	91	98	73	73	73	79	74	65	61	73	65	77
11	89	75	74	51	78	75	76	71	58	83	67	61
12	75	84	68	60	76	71	79	72	77	63	83	77
13	78	89	75	78	93	73	62	74	61	65	68	86
14	78	99	81	81	69	82	71	64	60	68	76	81
15	88	77	85	68	73	62	83	80	63	72	73	70
16	88	86	91	78	58	74	58	62	62	65	61	65
17	81	84	82	85	73	91	72	68	72	67	77	99
18	77	77	78	77	84	61	71	74	77	63	89	75
19	73	87	73	70	72	63	62	60	76	64	80	82
20	88	88	78	65	81	71	61	65	67	67	71	84
21	88	96	93	60	93	48	58	77	70	62	69	75
22	83	98	78	72	94	65	64	70	61	76	84	79
23	91	79	86	70	68	76	72	66	76	68	102	75
24	73	87	91	51	67	79	70	62	67	57	78	91
25	94	89	82	77	81	89	75	70	65	81	69	96
26	93	72	86	70	60	84	60	74	69	83	63	89
27	78	79	89	58	82	64	63	80	72	80	75	85
28	99	97	78	78	66	78	80	68	66	47	75	72
29	82	84	83	56	68	63	64	65	70	68	69	82
30	72		68	66	55	76	74	66	75	81	72	98
31	82		72		57		71	64		56		95
Total	2,641	2,497	2,457	2,230	2,234	2,173	2,169	2,143	2,040	2,161	2,258	2,508

TABLE 9-6

MORTALITY BY FIVE-YEAR AGE GROUPS AND COUNTY OF RESIDENCE, ARIZONA, 1988

County	All Ages	Under 1 Day	1-6 Days	7-27 Days	28 & Over	Total Infant	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Unknown
ARIZONA	27,511	217	95	72	250	634	165	57	93	262	360	411	474	535	534	639	876	1,303	2,047	3,000	3,626	3,968	3,693	4,797	37
Apache	329	3	1	1	5	10	13	0	5	15	20	15	15	16	10	9	14	18	19	20	26	27	22	54	1
Cochise	748	4	3	0	7	14	6	0	5	10	7	9	7	15	14	22	18	46	78	85	100	106	87	119	0
Coconino	404	9	3	2	8	22	8	2	4	5	8	10	21	12	14	15	14	25	34	32	50	35	30	63	0
Gila	413	2	2	1	2	7	1	0	2	3	3	4	4	6	13	9	14	21	33	47	71	61	54	59	1
Graham	197	0	1	1	1	3	2	0	0	2	0	2	5	4	4	3	4	10	15	24	29	32	28	30	0
Greenlee	64	2	0	0	0	2	0	0	0	1	3	1	0	1	1	0	4	1	6	9	9	11	6	9	0
La Paz	157	1	0	1	0	2	0	1	0	3	1	1	3	3	2	4	6	11	9	25	27	22	17	17	3
Maricopa	15,217	139	58	47	138	382	73	29	49	132	198	233	263	286	281	353	465	680	1,098	1,582	1,942	2,241	2,098	2,812	20
Mohave	972	3	2	0	10	15	4	0	2	11	5	11	10	19	16	14	48	45	82	156	149	154	115	116	0
Navajo	471	5	0	2	14	21	7	3	5	10	13	18	13	24	17	24	22	24	26	52	56	40	38	58	0
Pima	5,362	36	15	14	39	104	29	11	9	44	73	73	77	93	111	115	161	238	400	593	688	797	762	980	4
Pinal	1,019	4	5	0	6	15	6	5	9	13	15	18	14	21	25	28	44	70	71	129	140	137	136	121	2
Santa Cruz	193	1	2	0	5	8	2	0	1	1	3	1	6	1	4	7	5	6	20	12	28	23	24	41	0
Yavapai	1,217	5	1	2	5	13	6	1	1	8	3	10	16	16	12	23	26	55	98	149	205	187	180	208	0
Yuma	748	3	2	1	10	16	8	5	1	4	8	5	20	18	10	13	31	53	58	85	106	95	96	110	6

TABLE 9-7

MORTALITY BY COUNTY OF RESIDENCE, RACE[1] AND GENDER, ARIZONA, 1988

County of Residence	All Deaths	TOTAL All Races Male	TOTAL All Races Female	White Male	White Female	Total Non-White Male	Total Non-White Female	Black Male	Black Female	Native Americans Male	Native Americans Female	Other Male	Other Female
ARIZONA	27,511	15,353	12,158	14,185	11,366	1,168	792	417	306	680	447	71	39
Apache	329	209	120	41	19	168	101	-	-	168	101	-	-
Cochise	748	423	325	414	317	9	8	7	5	1	-	1	3
Coconino	404	236	168	163	113	73	55	3	4	70	50	-	1
Gila	413	229	184	209	165	20	19	-	-	19	18	2	-
Graham	197	108	89	96	81	12	8	2	3	10	5	-	-
Greenlee	64	30	34	30	33	-	1	-	-	-	1	-	-
La Paz	157	111	46	93	42	18	4	1	-	16	4	1	-
Maricopa	15,217	8,344	6,873	7,930	6,600	414	273	273	192	94	61	47	20
Mohave	972	604	368	590	361	14	7	2	1	11	5	1	1
Navajo	471	298	173	153	86	145	87	7	4	138	83	-	-
Pima	5,362	2,895	2,467	2,710	2,305	185	162	89	70	87	81	9	11
Pinal	1,019	622	397	546	349	76	48	18	16	56	29	2	3
Santa Cruz	193	107	86	106	84	1	2	1	1	-	1	-	-
Yavapai	1,217	692	525	683	522	9	3	1	1	8	2	-	-
Yuma	748	445	303	421	289	24	14	13	9	3	5	8	-

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[1] Each race includes records with indicated Hispanic origin. Compare Table 9-8.

TABLE 9-8

HISPANIC[1] MORTALITY BY COUNTY OF RESIDENCE, RACE AND GENDER, ARIZONA, 1988

County of Residence	All Deaths	TOTAL All Races Male	TOTAL All Races Female	White Male	White Female	Total Non-White Male	Total Non-White Female	Black Male	Black Female	Native Americans Male	Native Americans Female	Other Male	Other Female
ARIZONA	2,442	1,431	1,011	1,406	994	25	17	5	3	18	10	2	4
Apache	8	2	6	1	6	1	0	0	0	1	0	0	0
Cochise	146	83	63	83	62	0	1	0	1	0	0	0	0
Coconino	38	19	19	18	19	1	0	0	0	1	0	0	0
Gila	47	23	24	23	24	0	0	0	0	0	0	0	0
Graham	32	13	19	13	19	0	0	0	0	0	0	0	0
Greenlee	26	11	15	11	15	0	0	0	0	0	0	0	0
La Paz	6	3	3	3	2	0	1	0	0	0	1	0	0
Maricopa	1,026	632	394	622	385	10	9	1	0	7	7	2	2
Mohave	17	11	6	11	6	0	0	0	0	0	0	0	0
Navajo	26	19	7	16	7	3	0	1	0	2	0	0	0
Pima	637	361	276	356	273	5	3	2	0	3	2	0	1
Pinal	162	106	56	102	55	4	1	0	0	4	0	0	1
Santa Cruz	122	54	68	54	67	0	1	0	1	0	0	0	0
Yavapai	27	19	8	19	8	0	0	0	0	0	0	0	0
Yuma	122	75	47	74	46	1	1	1	1	0	0	0	0

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[1] Hispanic origin indicated on certificate

TABLE 9-9

DEATHS AND DEATH RATES[1] FOR SELECTED 75 CAUSES, ARIZONA AND UNITED STATES, 1988

Cause of death (Ninth Revision, International Classification of Diseases, 1975)		ARIZONA # of deaths	ARIZONA Rate	U.S. Rate
All Causes		27,511	765.4	883.0
Shigellosis and amebiasis	004,006	1	0.0	0.0
Certain other intestinal infections	007-009	3	0.1	0.1
Tuberculosis	010-018	25	0.7	0.8
Tuberculosis of respiratory system	010-012	20	0.6	0.7
Other tuberculosis	013-018	5	0.1	0.1
Whooping cough	033	1	0.0	0.0
Streptococcal sore throat, scarlatina, and erysipelas	034-035	-	-	0.0
Meningococcal infection	036	2	0.1	0.1
Septicemia	038	206	5.7	8.5
Human immunodeficiency virus (HIV) infection[2]	042*-044*	161	4.5	6.6
Acute poliomyelitis	045	1	0.0	0.0
Measles	055	-	-	-
Viral hepatitis	070	14	0.4	0.5
Syphilis	090-097	2	0.1	0.0
All other infectious and parasitic diseases	001-003,005,020-032,037,039-041 046-054,056-066,071-088,098-139	94	2.6	2.5
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208	6,269	174.4	198.6
Malignant neoplasms of lip, oral cavity, and pharynx	140-149	84	2.3	3.2
Malignant neoplasms of digestive organs and peritoneum	150-159	1,449	40.3	47.4
Malignant neoplasms of respiratory and intrathoracic organs	160-165	1,899	52.3	57.3
Malignant neoplasm of breast	174-175	498	13.9	17.5
Malignant neoplasms of genital organs	179-187	649	18.1	21.8
Malignant neoplasms of urinary organs	188-189	276	7.7	7.9
Malignant neoplasms of all other and unspecified sites	170-173,190-199	807	22.5	25.0
Leukemia	204-208	250	7.0	7.1
Other malignant neoplasms of lymphatic and hematopoietic tissues	200-203	357	9.9	11.5
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239	99	2.8	2.9
Diabetes mellitus	250	534	14.9	16.1
Nutritional deficiencies	260-269	44	1.2	1.1
Anemias	280-285	46	1.3	1.5
Meningitis	320-322	18	0.5	0.5
Alzheimer's disease	331.0	224	6.2	NA
Parkinson's disease	332	78	2.2	NA
Multiple sclerosis	340	22	0.6	NA
Major cardiovascular diseases	390-448	10,831	301.3	395.5
Diseases of heart	390-398,402,404-429	8,695	241.9	312.2
Rheumatic fever and rheumatic heart disease	390-398	79	2.2	2.7
Hypertensive heart disease	402	142	4.0	8.3
Hypertensive heart and renal disease	404	8	0.2	1.0
Ischemic heart disease	410-414	6,270	174.4	207.9
Acute myocardial infarction	410	2,672	74.3	101.7
Other acute and subacute forms of ischemic heart disease	411	170	4.7	1.4
Angina pectoris	413	9	0.3	0.4
Old myocardial infarction and other forms of chronic ischemic heart disease	412,414	3,419	95.1	104.3

Other diseases of endocardium	424	152	4.2	4.5
All other forms of heart disease	415-423,425-429	1,951	54.3	87.8
Hypertension with or without renal disease	401,403	93	2.6	3.3
Cerebrovascular diseases	430-438	1,521	42.3	61.1
Intracerebral and other intracranial hemorrhage	431-432	244	6.8	8.8
Cerebral thrombosis and unspecified occlusion of cerebral arteries	434.0,434.9	160	4.5	8.5
All other and late effects of cerebrovascular diseases	430,433,435-438	1,117	31.1	43.6
Atherosclerosis	440	316	8.8	9.6
Other diseases of arteries, arterioles, and capillaries	441-448	299	8.3	9.2
Acute bronchitis and bronchiolitis	466	4	0.1	0.3
Pneumonia and influenza	480-487	1,014	28.2	31.5
Pneumonia	480-486	999	27.8	30.7
Influenza	487	15	0.4	0.8
Chronic obstructive pulmonary diseases and allied conditions	490-496	1,459	40.6	33.3
Bronchitis, chronic and unspecified	490-491	49	1.4	1.4
Emphysema	492	336	9.4	6.4
Asthma	493	92	2.6	1.9
Other chronic obstructive pulmonary diseases and allied conditions	494-496	982	27.3	23.7
Ulcer of stomach and duodenum	531-533	84	2.3	2.6
Appendicitis	540-543	5	0.1	0.2
Hernia of abdominal cavity and intestinal obstruction without mention of hernia	550-553,560	62	1.7	2.1
Chronic liver disease and cirrhosis	571	446	12.4	10.6
Cholelithiasis and other disorders of gallbladder	574-575	32	0.9	1.3
Nephritis, nephrotic syndrome, and nephrosis	580-589	276	7.6	8.9
Acute glomerulonephritis and nephrotic syndrome	580-581	6	0.2	0.1
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified	582-583,587	14	0.4	0.5
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause	584-586,588-589	255	71	8.3
Infections of kidney	590	26	0.7	0.6
Hyperplasia of prostate	600	3	0.1	0.2
Complications of pregnancy, childbirth, and the puerperium	630-676	6	0.2	0.1
Pregnancy with abortive outcome	630-638	-	-	0.0
Other complications of pregnancy, childbirth, and the puerperium	640-676	6	0.2	0.1
Congenital anomalies	740-759	232	6.5	5.2
Certain conditions originating in the perinatal period	760-779	256	7.1	7.5
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome	767-769	49	1.4	1.7
Other conditions originating in the perinatal period	760-766,770-779	207	5.8	5.8
Symptoms, signs, and ill-defined conditions	780-799	253	7.0	12.9
All other diseases	Residual	2,149	59.8	68.1[3]
Accidents and adverse effects	E800-E949	1,624	45.2	39.7
Motor vehicle accidents	E810-E825	896	24.9	20.4
All other accidents and adverse effects	E800-E807,E826-E949	728	20.3	19.3
Suicide	E950-E959	666	18.5	12.3
Homicide and legal intervention	E960-E978	338	9.4	9.0
All other external causes	E980-E999	39	1.1	1.5

[1] Rates per 100,000 population. The U.S. data are provisional.

[2] Beginning with data for 1987, the National Center for Health Statistics introduced category numbers 042*-044* for classifying and coding human immunodeficiency virus (HIV) infection. The asterisk indicates that these codes are not part of the Ninth Revision of the International Classification of Diseases.

[3] Includes mortality from Alzheimer's disease, Parkinson's disease and multiple sclerosis

-: Quantity zero

0.0: Quantity equal or less than 0.05

TABLE 9-10

LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, 1988

Cause of Death	Total	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	27,511	329	748	404	413	197	64	157	15,217	972	471	5,362	1,019	193	1,217	748
Heart Disease	8,695	48	263	109	140	54	24	57	4,848	337	131	1,677	327	65	387	228
Cancer	6,269	49	166	60	87	43	16	34	3,577	236	69	1,241	199	36	286	170
Unintentional Injuries	1,624	81	46	59	23	12	3	10	788	56	68	264	99	7	52	56
Motor Vehicle-related	896	52	28	37	12	7	2	4	430	35	37	131	57	5	33	26
Other than Motor Vehicle	728	29	18	22	11	5	1	6	358	21	31	133	42	2	19	30
Cerebrovascular Disease	1,521	7	33	15	19	16	5	3	869	47	20	295	57	19	71	45
Chronic Obstructive Pulmonary Disease	1,459	4	26	12	21	15	4	6	818	44	10	316	45	12	77	49
Influenza and Pneumonia	1,014	16	25	11	18	6	1	2	579	33	18	179	32	3	66	25
Suicide	666	13	16	10	4	5	3	5	366	24	10	146	23	3	23	15
Diabetes	534	12	17	16	13	7	1	4	250	14	17	114	33	7	20	9
Infectious/Parasitic Diseases[1]	510	11	14	5	11	2	0	3	305	7	9	99	14	1	20	45
Alcoholism	350	19	12	10	6	2	0	2	138	10	24	79	19	4	14	11
Homicide	338	10	6	6	3	1	0	5	192	12	7	62	18	0	7	9
Atherosclerosis	316	1	2	6	0	3	0	4	118	21	1	121	11	0	16	12
Other Diseases of the Arteries	299	1	10	3	9	2	0	2	171	8	5	54	9	1	20	4
Perinatal Conditions	256	0	5	10	2	0	2	1	163	6	4	46	8	2	3	4
Symptoms and Ill-Defined Conditions	253	11	5	14	3	6	1	1	140	9	6	26	10	2	8	11
Congenital Anomalies	232	6	6	4	3	0	0	2	144	2	8	35	5	4	6	7
All Other Causes	3,175	40	96	54	51	23	4	17	1,751	106	64	608	110	27	141	83

[1] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics

TABLE 9-11

RATES[1] FOR THE LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, UNITED STATES, 1988

Cause of Death	U.S.[2]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	883.0	765.4	511.0	730.3	426.1	1,019.7	800.7	671.5	1,098.4	735.4	1,194.1	607.4	782.5	923.7	640.3	1,242.3	818.2
Heart Disease	312.2	241.9	74.6	256.8	115.0	345.6	219.5	251.8	398.8	234.3	414.0	168.9	244.7	296.4	215.6	395.1	249.4
Cancer	198.6	174.4	76.1	162.1	63.3	214.8	174.8	167.9	237.9	172.9	289.9	89.0	181.1	180.4	119.4	292.0	186.0
Unintentional Injuries	39.7	45.2	125.8	44.9	62.2	56.8	48.8	31.5	70.0	38.1	68.8	87.7	38.5	89.8	23.2	53.1	61.2
Motor Vehicle-Related	20.4	24.9	80.8	87.3	39.0	29.6	28.5	21.0	28.0	20.8	43.0	47.7	19.1	51.7	16.6	33.7	28.4
Other than Motor Vehicle	19.3	20.3	45.0	17.6	23.2	27.2	20.3	10.5	42.0	17.3	25.8	40.0	19.4	38.1	6.6	19.4	32.8
Cerebrovascular Disease	61.1	42.3	10.9	32.2	15.8	46.9	65.0	52.5	21.0	42.0	57.7	25.8	43.1	51.7	63.0	72.5	49.2
Chronic Obstructive Pulmonary Disease	33.3	40.6	6.2	25.4	12.7	51.9	61.0	42.0	42.0	39.5	54.1	12.9	46.1	40.8	39.8	78.6	53.6
Influenza and Pneumonia	31.5	28.2	24.9	24.4	11.6	44.4	24.4	10.5	14.0	28.0	40.5	23.2	26.1	29.0	10.0	67.4	27.4
Suicide	12.3	18.5	20.2	15.6	10.6	9.9	20.3	31.5	35.0	17.7	29.5	12.9	21.3	20.9	10.0	23.5	16.4
Diabetes	16.1	14.9	18.6	16.6	16.9	32.1	28.5	10.5	28.0	12.1	17.2	21.9	16.6	29.9	23.2	20.4	9.8
Infectious/Parasitic Diseases[3]	17.4	14.2	17.1	13.7	5.3	27.2	8.1	-	14.0	14.7	8.6	11.6	14.5	12.7	3.3	20.4	10.9
Alcoholism	NA	9.7	29.5	11.7	10.6	14.8	8.1	-	14.0	6.7	12.3	31.0	11.5	17.2	13.3	14.3	12.0
Homicide	9.0	9.4	15.5	5.9	6.3	7.4	4.1	-	35.0	9.3	14.7	9.0	9.1	16.3	-	7.2	9.8
Atherosclerosis	9.6	8.8	1.6	2.0	6.3	-	12.2	-	28.0	5.7	25.8	1.3	17.7	10.0	-	16.3	13.1
Other Diseases of the Arteries	9.2	8.3	1.6	9.8	3.2	22.2	8.1	-	14.0	8.3	9.8	6.5	7.9	8.2	3.3	20.4	4.4
Perinatal Conditions	7.5	7.1	-	4.9	10.6	4.9	-	21.0	7.0	7.9	7.4	5.2	6.7	7.3	6.6	3.1	4.4
Symptoms and Ill-Defined Conditions	12.9	7.0	17.1	4.9	14.8	7.4	24.4	10.5	7.0	6.8	11.1	7.7	3.8	9.1	6.6	8.2	12.0
Congenital Anomalies	5.2	6.5	9.3	5.9	4.2	7.4	-	-	14.0	7.0	2.5	10.3	5.1	4.5	13.3	6.1	7.7
All Other Causes	107.4	88.3	62.1	93.7	57.0	125.9	93.5	42.0	118.9	84.6	130.2	82.5	88.7	99.7	89.6	143.9	90.8

[1] Number of deaths per 100,000 population

[2] Provisional

[3] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 9-12

PERCENT OF TOTAL DEATHS FOR THE LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, UNITED STATES, 1988

Cause of Death	U.S.[1]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Heart Disease	35.4	31.6	14.6	35.2	27.0	33.9	27.4	37.5	36.3	31.9	34.7	27.8	31.3	32.1	33.7	31.8	30.5
Cancer	22.5	22.8	14.9	22.2	14.9	21.1	21.8	25.0	21.7	23.5	24.3	14.6	23.1	19.5	18.7	23.5	22.7
Unintentional Injuries	4.5	5.9	24.6	6.1	14.6	5.6	6.1	4.7	6.4	5.2	5.8	14.4	4.9	9.7	3.6	4.3	7.5
Motor Vehicle-Related	2.3	3.3	15.8	3.7	9.2	2.9	3.6	3.1	2.5	2.8	3.6	7.9	2.4	5.6	2.6	2.7	3.5
Other than Motor Vehicle	2.2	2.6	8.8	2.4	5.4	2.7	2.5	1.6	3.8	2.4	2.2	6.6	2.5	4.1	1.0	1.6	4.0
Cerebrovascular Disease	6.9	5.5	2.1	4.4	3.7	4.6	8.1	7.8	1.9	5.7	4.8	4.2	5.5	5.6	9.8	5.8	6.0
Chronic Obstructive Pulmonary Disease	3.8	5.3	1.2	3.5	3.0	5.1	7.6	6.3	3.8	5.4	4.5	2.1	5.9	4.4	6.2	6.3	6.6
Influenza and Pneumonia	3.6	3.7	4.9	3.3	2.7	4.4	3.0	1.6	1.3	3.8	3.4	3.8	3.3	3.1	1.6	5.4	3.3
Suicide	1.4	2.4	4.0	2.1	2.5	1.0	2.5	4.7	3.2	2.4	2.5	2.1	2.7	2.3	1.6	1.9	2.0
Diabetes	1.8	1.9	3.6	2.3	4.0	3.1	3.6	1.6	2.5	1.6	1.4	3.6	2.1	3.2	3.6	1.6	1.2
Infectious/Parasitic Diseases[2]	2.0	1.9	3.3	1.9	1.2	2.7	1.0	-	1.9	2.0	0.7	1.9	1.8	1.4	0.5	1.6	6.0
Alcoholism	NA	1.3	5.8	1.6	2.5	1.5	1.0	-	1.3	0.9	1.0	5.1	1.5	1.9	2.1	1.2	1.5
Homicide	1.0	1.2	3.0	0.8	1.5	0.7	0.5	-	3.2	1.3	1.2	1.5	1.2	1.8	-	0.6	1.2
Atherosclerosis	1.1	1.1	0.3	0.3	1.5	-	1.5	-	2.5	0.8	2.2	0.2	2.3	1.1	-	1.3	1.6
Other Diseases of the Arteries	1.0	1.1	0.3	1.3	0.7	2.2	1.0	-	1.3	1.1	0.8	1.1	1.0	0.9	0.5	1.6	0.5
Perinatal Conditions	0.8	0.9	-	0.7	2.5	0.5	-	3.1	0.6	1.1	0.6	0.8	0.9	0.8	1.0	0.2	0.5
Symptoms and Ill-Defined Conditions	1.5	0.9	3.3	0.7	3.5	0.7	3.0	1.6	0.6	0.9	0.9	1.3	0.5	1.0	1.0	0.7	1.5
Congenital Anomalies	0.6	0.8	1.8	0.8	1.0	0.7	-	-	1.3	0.9	0.2	1.7	0.7	0.5	2.1	0.5	0.9
All Other Causes	12.2	11.5	12.2	12.8	13.4	12.3	11.7	6.3	10.8	11.5	10.9	13.6	11.3	10.8	14.0	11.6	11.1

[1] Provisional

[2] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 9-13

FIVE LEADING CAUSES OF DEATH[1] AMONG CHILDREN (1 - 14 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1988

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1988
WHITE[2]	Unintentional injuries	54.3	50.2	54.7	[illegible]	42.4
	Motor vehicle-related	16.8	28.2	25.0	[illegible]	20.1
	Drowning	10.1	11.3	10.1	10.7	12.0
	Other than motor vehicle	27.4	10.7	19.6	12.8	10.3
	Malignant neoplasms	11.5	16.9	9.5	10.2	12.0
	Congenital anomalies	5.8	7.3	5.4	5.3	8.7
	Diseases of heart	1.9	4.0	1.8	-	3.3
	Suicide	0.5	-	1.8	0.5	1.1
	(Number of all deaths)	(208)	(177)	(168)	(187)	(184)
HISPANIC	Unintentional injuries	58.7	47.7	60.7	49.1	56.7
	Motor vehicle-related	32.0	16.4	26.8	24.5	33.3
	Drowning	10.7	16.4	23.2	15.1	13.3
	Other than motor vehicle	16.0	14.9	10.7	9.5	10.1
	Malignant neoplasms	6.7	9.0	3.6	9.4	5.0
	Congenital anomalies	4.0	9.0	5.4	9.4	8.3
	Homicide	-	9.0	12.5	5.7	5.0
	Infectious disease	12.0	6.0	1.8	1.9	1.7
	(Number of all deaths)	(75)	(67)	(56)	(53)	(60)
BLACK	Unintentional injuries	46.2	42.8	44.4	35.0	50.0
	Motor vehicle-related	-	9.5	33.3	20.0	36.4
	Drowning	23.1	19.0	11.1	-	4.5
	Other than motor vehicle	23.1	14.3	-	15.0	9.1
	Homicide	7.7	5.2	-	20.0	13.6
	Chronic obstructive pulmonary disease	-	4.8	-	-	9.1
	Congenital anomalies	23.1	4.8	11.1	-	13.6
	(Number of all deaths)	(13)	(21)	(9)	(20)	(22)
NATIVE AMERICAN	Unintentional injuries	60.0	53.9	45.7	62.5	47.9
	Motor vehicle-related	26.7	32.8	28.6	35.0	27.1
	Drowning	8.3	8.6	-	7.5	8.3
	Other than motor vehicle	25.0	12.5	17.1	20.0	12.5
	Malignant neoplasms	1.7	3.4	9.6	-	6.3
	Diseases of heart	-	-	8.6	7.5	2.1
	Pneumonia and influenza	8.3	8.6	-	-	8.3
	Chronic obstructive pulmonary disease	-	1.7	2.9	-	4.2
	(Number of all deaths)	(60)	(58)	(35)	(40)	(48)
TOTAL: ALL ETHNIC GROUPS[3]	Unintentional injuries	55.8	50.0	54.6	49.2	46.3
	Motor vehicle-related	21.0	25.3	26.7	23.0	24.8
	Drowning	10.4	12.7	11.4	11.7	11.1
	Other than motor vehicle	24.4	12.0	16.5	14.5	13.7
	Malignant neoplasms	8.7	12.0	8.1	8.7	9.5
	Congenital anomalies	5.6	6.2	5.5	6.9	8.3
	Diseases of heart	1.7	2.5	2.2	1.0	3.2
	Homicide	1.7	4.3	5.1	6.1	7.9
	(Number of all deaths)	(357)	(324)	(273)	(275)	(315)

[1] Leading causes are based on 1988 vital records

[2] Includes only whites of non-Hispanic origin

[3] Includes other ethnic groups

TABLE 9-14

FIVE LEADING CAUSES OF DEATH[1] AMONG ADOLESCENTS (15 - 19 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1988

		Proportional mortality (%)				
ETHNICITY	LEADING CAUSES OF DEATH	1970	1975	1980	1985	1988
WHITE[2]	Unintentional injuries	61.2	59.9	58.4	48.9	58.0
	Motor vehicle-related	39.4	42.7	41.6	44.9	46.9
	Other than motor vehicle	21.8	17.2	16.8	11.4	11.1
	Suicide	9.2	15.9	12.9	18.4	20.4
	Malignant neoplasms	4.2	4.5	7.3	8.2	6.2
	Homicide	8.5	3.2	4.5	3.8	3.1
	Congenital anomalies	2.1	1.3	1.7	2.5	1.9
	(Number of all deaths)	(142)	(157)	(178)	(158)	(162)
HISPANIC	Unintentional injuries	55.3	52.4	51.8	61.7	53.8
	Motor vehicle-related	31.9	34.4	37.0	55.3	36.5
	Other than motor vehicle	23.4	18.0	14.8	6.4	17.3
	Suicide	-	6.6	9.3	12.8	11.5
	Homicide	4.3	4.5	20.4	8.5	21.2
	Malignant neoplasms	4.3	1.6	7.4	4.3	5.8
	Congenital anomalies	4.3	1.6	1.9	-	-
	(Number of all deaths)	(47)	(61)	(54)	(47)	(52)
NATIVE AMERICAN	Unintentional injuries	68.2	64.0	56.4	55.5	63.2
	Motor vehicle-related	45.5	44.0	41.0	51.1	50.0
	Other than motor vehicle	22.7	20.0	15.4	4.4	13.2
	Suicide	6.8	8.0	12.8	8.9	18.4
	Homicide	9.1	10.0	12.8	15.6	7.9
	Malignant neoplasms	2.3	-	-	4.4	-
	(Number of all deaths)	(44)	(50)	(39)	(45)	(38)
TOTAL: ALL ETHNIC GROUPS[3]	Unintentional injuries	61.6	58.0	56.8	55.6	56.5
	Motor vehicle-related	39.7	40.4	40.5	47.1	44.3
	Other than motor vehicle	21.9	17.6	16.3	8.5	12.2
	Suicide	6.8	12.5	11.8	15.7	17.9
	Homicide	5.5	8.8	11.8	7.2	9.5
	Malignant neoplasms	6.3	2.2	4.8	6.5	5.0
	Congenital anomalies	2.1	1.1	1.4	1.5	1.1
	(Number of all deaths)	(237)	(272)	(289)	(261)	(262)

[1] Leading causes are based on 1988 vital records

[2] Includes only whites of non-Hispanic origin

[3] Includes other ethnic groups. Specific causes of ten deaths to Black adolescents in Arizona in 1988 are not shown separately

TABLE 9-15

FIVE LEADING CAUSES OF DEATH[1] AMONG YOUNG ADULTS (20 - 44 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1988

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%)				
		1970	1975	1980	1985	1988
WHITE[2]	Unintentional injuries	32.2	30.1	34.4	32.9	27.1
	Motor vehicle-related	19.2	17.7	24.4	22.8	16.7
	Other than motor vehicle	13.0	12.4	10.0	10.1	10.5
	Suicide	9.5	14.2	14.3	15.9	17.3
	Malignant neoplasms	15.6	14.8	14.0	13.6	13.8
	Diseases of heart	9.7	11.5	8.7	9.2	8.4
	HIV infection	--	-	NA	NA	7.2
	(Number of all deaths)	(877)	(1005)	(1204)	(1320)	(1547)
HISPANIC	Unintentional injuries	37.7	33.9	38.6	30.7	34.9
	Motor vehicle-related	27.2	22.7	29.7	22.8	20.8
	Other than motor vehicle	10.5	11.2	8.9	7.9	14.1
	Homicide	9.2	10.0	15.7	15.7	14.4
	Suicide	5.3	11.2	12.3	11.2	9.6
	Malignant neoplasms	11.0	8.8	7.6	10.9	12.7
	Diseases of heart	6.1	8.1	6.8	6.0	4.8
	(Number of all deaths)	(228)	(260)	(236)	(267)	(355)
BLACK	Unintentional injuries	16.3	17.4	16.9	19.0	17.6
	Motor vehicle-related	7.4	5.8	9.2	11.1	9.8
	Other than motor vehicle	8.9	11.4	7.7	7.9	7.8
	Homicide	30.9	33.7	18.5	17.5	22.5
	Malignant neoplasms	7.4	5.8	15.4	4.8	9.8
	Diseases of heart	12.3	8.1	9.2	12.7	6.5
	Suicide	1.2	2.3	7.7	9.5	8.8
	(Number of all deaths)	(81)	(86)	(65)	(63)	(102)
NATIVE AMERICAN	Unintentional injuries	46.2	41.0	39.2	42.5	45.9
	Motor vehicle-related	31.3	28.9	27.7	30.4	30.4
	Other than motor vehicle	14.9	12.1	11.5	12.1	15.5
	Suicide	4.8	8.2	8.3	10.1	7.1
	Homicide	5.3	5.9	7.9	9.7	9.8
	Alcoholism	12.5	12.9	17.4	10.5	13.9
	Malignant neoplasms	3.8	5.8	2.8	2.4	1.0
	(Number of all deaths)	(208)	(256)	(253)	(247)	(296)
TOTAL: ALL ETHNIC GROUPS[3]	Unintentional injuries	34.1	31.8	34.9	33.4	30.2
	Motor vehicle-related	21.5	19.7	24.9	23.4	18.7
	Other than motor vehicle	12.6	12.1	10.0	10.0	11.5
	Suicide	7.7	12.1	13.0	14.3	14.6
	Malignant neoplasms	12.7	12.1	11.5	11.6	11.9
	Homicide	7.2	8.2	9.2	8.1	8.9
	Disease of heart	8.2	9.6	7.7	8.5	7.2
	(Number of all deaths)	(1398)	(1614)	(1768)	(1908)	(2314)

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[1] Leading causes are based on 1988 vital records

[2] Includes only whites of non-Hispanic origin

[3] Includes other ethnic groups

TABLE 9-16

FIVE LEADING CAUSES OF DEATH[1] AMONG MIDDLE AGED ADULTS (45-64 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1988

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1988
WHITE[2]	Malignant neoplasms	23.7	29.7	33.0	35.7	37.2
	Diseases of heart	32.5	32.9	31.9	29.4	28.4
	Chronic obstructive pulmonary disease	5.0	3.6	6.1	5.5	5.4
	Unintentional injuries	6.5	4.1	4.2	4.6	4.3
	Motor vehicle-related	3.4	1.8	2.3	2.9	2.2
	Other than motor vehicle	3.1	2.3	1.9	1.7	2.1
	Suicide	2.5	3.1	3.6	3.4	3.0
	(Number of all deaths)	(3016)	(3311)	(3873)	(3923)	(3895)
HISPANIC	Malignant neoplasms	17.2	23.6	25.6	25.5	26.1
	Diseases of heart	29.6	29.4	24.4	28.9	30.5
	Alcoholism	8.0	9.6	6.9	5.4	5.6
	Unintentional injuries	7.8	7.0	9.7	7.2	6.0
	Motor vehicle-related	4.6	3.9	5.5	4.6	4.0
	Other than motor vehicle	3.2	3.1	4.2	2.6	2.0
	Diabetes	4.9	3.3	2.3	4.1	5.6
	(Number of all deaths)	(412)	(513)	(434)	(462)	(502)
BLACK	Malignant neoplasms	17.7	23.6	24.0	31.0	32.7
	Diseases of heart	23.4	32.6	32.9	31.6	31.0
	Unintentional injuries	3.2	4.2	4.8	3.2	7.0
	Motor vehicle-related	0.7	2.1	1.4	1.3	2.9
	Other than motor vehicle	2.5	2.1	3.4	1.9	4.1
	Chronic obstructive pulmonary disease	4.4	1.4	2.1	3.9	0.6
	Homicide	5.7	4.2	6.2	0.7	1.2
	(Number of all deaths)	(158)	(144)	(146)	(155)	(171)
NATIVE AMERICAN	Unintentional injuries	17.8	19.1	16.9	13.2	15.5
	Motor vehicle-related	8.9	9.3	8.7	6.4	7.2
	Other than motor vehicle	8.9	9.8	8.2	6.8	8.3
	Diseases of heart	14.1	12.4	16.4	14.6	20.9
	Diabetes	3.6	3.6	6.8	12.3	9.4
	Malignant neoplasms	8.3	9.8	10.1	15.5	10.8
	Alcoholism	13.0	13.5	13.6	10.5	14.0
	(Number of all deaths)	(192)	(193)	(207)	(220)	(278)
TOTAL: ALL ETHNIC GROUPS[3]	Malignant neoplasms	30.9	31.6	30.5	33.7	34.3
	Diseases of heart	22.0	27.8	31.0	28.7	28.2
	Chronic obstructive pulmonary disease	4.5	3.2	5.3	4.8	4.7
	Unintentional injuries	7.1	5.2	5.4	4.3	5.2
	Motor vehicle-related	3.7	2.5	2.9	2.4	2.7
	Other than motor vehicle	3.4	2.7	2.5	1.9	2.5
	Suicide	2.4	2.6	2.4	2.6	2.7
	(Number of all deaths)	(3836)	(4171)	(4672)	(4778)	(4865)

[1] Leading causes are based on 1988 vital records
[2] Includes only whites of non-Hispanic origin
[3] Includes other ethnic groups

TABLE 9-17

FIVE LEADING CAUSES OF DEATH[1] AMONG ELDERLY (65 YEARS AND OLDER) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1988

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1988
WHITE[2]	Diseases of heart	41.5	41.8	41.2	38.8	37.6
	Malignant neoplasms	16.3	18.7	20.7	22.3	22.7
	Cerebrovascular disease	13.1	12.2	8.9	7.8	7.1
	Chronic obstructive pulmonary disease	4.7	3.2	6.4	6.7	6.7
	Pneumonia and influenza	3.5	3.3	3.7	4.0	4.5
	(Number of all deaths)	(7180)	(8507)	(12027)	(15063)	(17008)
HISPANIC	Diseases of heart	38.1	38.5	37.9	37.3	37.2
	Malignant neoplasms	15.4	18.2	18.6	22.2	20.0
	Cerebrovascular disease	11.7	12.3	8.6	7.0	5.5
	Diabetes	3.7	2.6	3.7	5.5	5.0
	Pneumonia and influenza	3.7	2.6	3.7	4.4	5.0
	(Number of all deaths)	(712)	(940)	(881)	(939)	(1247)
BLACK	Diseases of heart	37.6	37.7	37.7	34.9	36.5
	Malignant neoplasms	17.8	18.2	17.6	27.7	22.9
	Cerebrovascular disease	10.4	12.7	8.8	8.6	7.2
	Pneumonia and influenza	5.9	3.8	3.3	2.9	5.5
	Diabetes	5.4	2.5	5.1	3.6	3.6
	(Number of all deaths)	(202)	(236)	(273)	(278)	(362)
NATIVE AMERICAN	Diseases of heart	21.3	14.2	25.9	25.7	25.2
	Malignant neoplasms	6.3	11.4	10.2	11.3	16.5
	Pneumonia and influenza	13.0	11.4	10.5	8.1	6.4
	Unintentional injuries	5.9	4.6	3.8	4.6	6.9
	Motor vehicle-related	4.2	2.8	3.0	1.3	2.2
	Other than motor vehicle	1.7	1.8	0.8	3.3	4.7
	Diabetes	1.7	5.0	8.1	7.1	11.1
	(Number of all deaths)	(239)	(281)	(371)	(397)	(405)
TOTAL: ALL ETHNIC GROUPS[3]	Diseases of heart	40.6	40.6	40.6	38.3	37.3
	Malignant neoplasms	16.0	18.5	20.2	22.1	21.4
	Cerebrovascular disease	12.8	12.1	8.7	7.8	6.9
	Chronic obstructive pulmonary disease	4.5	2.9	6.0	6.3	6.4
	Pneumonia and influenza	3.9	3.7	3.9	4.1	4.6
	(Number of all deaths)	(8439)	(9984)	(13580)	(16723)	(19083)

[1] Leading causes are based on 1988 vital records

[2] Includes only whites of non-Hispanic origin

[3] Includes other ethnic groups

TABLE 9-18

FIVE LEADING CAUSES OF DEATH[1] BY ETHNICITY, (ALL AGES), ARIZONA, SELECTED YEARS, 1970 - 1988

		Proportional mortality (%)				
ETHNICITY	LEADING CAUSES OF DEATH	1970	1975	1980	1985	1988
WHITE[2]	Diseases of heart	34.3	35.4	35.4	33.9	33.1
	Malignant neoplasms	17.6	20.6	22.3	23.7	24.0
	Cerebrovascular disease	9.3	9.0	7.1	6.3	5.8
	Chronic obstructive pulmonary disease	4.4	3.0	5.7	6.0	5.9
	Unintentional injuries	7.3	5.9	5.8	4.8	4.6
	(Number of all deaths)	(11554)	(13234)	(17833)	(20893)	(23151)
HISPANIC	Diseases of heart	25.5	26.8	25.4	27.4	26.7
	Malignant neoplasms	13.2	16.1	16.7	19.1	18.0
	Unintentional injuries	13.2	10.7	12.4	10.1	10.5
	Cerebrovascular disease	7.8	7.7	5.6	4.7	4.0
	Diabetes	3.1	2.2	2.4	3.8	3.8
	(Number of all deaths)	(1623)	(2001)	(1798)	(2002)	(2400)
BLACK	Diseases of heart	24.6	27.6	28.5	27.9	26.6
	Malignant neoplasms	14.1	15.7	17.1	22.9	20.7
	Unintentional injuries	6.8	7.0	6.5	6.8	7.2
	Cerebrovascular disease	[illegible]	8.3	6.0	5.2	5.3
	Homicide	[illegible]	7.6	5.4	3.6	5.1
	(Number of all deaths)	(495)	(529)	(551)	(559)	(723)
NATIVE AMERICAN	Unintentional injuries	27.0	24.8	20.7	20.1	22.9
	Diseases of Heart	10.2	8.3	14.8	15.1	15.5
	Malignant Neoplasms	4.9	7.4	7.2	8.5	9.1
	Diabetes	1.6	2.7	4.8	5.7	6.7
	Alcoholism	6.3	6.9	8.1	5.3	7.6
	(Number of all deaths)	(859)	(931)	(988)	(1021)	(1127)
TOTAL: ALL ETHNIC GROUPS[3]	Diseases of heart	31.7	32.7	33.4	32.4	31.6
	Malignant neoplasms	16.2	19.2	20.9	22.7	22.8
	Cerebrovascular disease	8.9	8.6	6.7	6.1	5.5
	Unintentional injuries	9.1	7.4	7.2	5.9	5.9
	Chronic obstructive pulmonary disease	3.8	2.6	5.1	5.3	5.3
	(Number of all deaths)	(14857)	(16964)	(21226)	(24577)	(27511)

[1] Leading causes are based on 1988 vital records

[2] Includes only whites of non-Hispanic origin

[3] Includes other ethnic groups

MARRIAGE AND DIVORCE STATISTICS

TABLE 10-1

MARRIAGES BY COUNTY OF OCCURRENCE,[1] ARIZONA, 1950-1988

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987	1988
ARIZONA	20,031	21,831	10,153	12,113	19,069	26,558	30,223	35,723	36,025	36,207	35,661
Apache	79	93	75	73	103	146	165	181	217	195	192
Cochise	237	414	352	408	681	874	1,072	992	981	878	887
Coconino	384	408	247	331	561	645	775	656	855	940	976
Gila	282	327	209	240	391	469	512	403	418	419	378
Graham	120	106	119	124	208	292	317	284	327	275	277
Greenlee	80	80	56	55	103	150	85	53	53	59	56
La Paz	NA	NA	NA	NA	NA	NA	NA	186	193	145	186
Maricopa[2]	3,866	4,702	4,640	6,041	10,193	13,022	16,134	21,860	21,340	21,003	20,610
Mohave	599	934	67	77	121	223	407	698	788	1,056	1,456
Navajo	259	277	206	268	328	420	581	548	504	486	591
Pima	1,406	1,792	1,818	2,433	3,933	5,252	5,728	5,692	6,325	6,677	6,088
Pinal	1,065	866	531	528	746	791	947	923	847	895	872
Santa Cruz	494	517	262	282	364	316	311	350	356	311	329
Yavapai	310	290	210	277	382	465	610	887	889	879	789
Yuma	10,850	11,025	1,361	976	955	3,493	2,579	2,010	1,932	1,989	1,974

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[1] Marriages recorded unless otherwise indicated

[2] Marriage licenses issued

TABLE 10-2

MARRIAGE RATES[1] BY COUNTY OF OCCURRENCE, ARIZONA, UNITED STATES, 1950-1988

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987	1988
U.S.	11.1	9.3	8.5	9.3	10.6	10.0	10.9	10.2	10.0	9.9[2]	9.7[2]
ARIZONA	26.7	22.1	7.8	7.6	10.8	11.9	11.1	11.2	10.7	10.4	9.9
Apache	2.8	3.2	2.5	2.1	3.2	3.6	3.2	3.2	3.6	3.1	3.0
Cochise	7.5	10.0	6.4	7.2	11.0	11.8	12.4	10.3	10.0	8.8	8.7
Coconino	16.1	12.9	5.9	6.7	11.6	9.9	10.3	7.6	9.6	10.2	10.3
Gila	11.7	13.2	8.1	8.6	13.4	14.4	13.8	10.6	10.5	10.4	9.3
Graham	9.2	7.9	8.5	7.9	12.5	14.5	13.6	12.2	13.3	11.1	11.3
Greenlee	6.2	6.6	4.9	5.2	10.0	12.6	7.5	6.1	5.5	6.1	5.9
La Paz	-	-	-	-	-	-	-	12.9	13.7	10.2	13.0
Maricopa	11.7	9.9	7.0	7.1	10.5	10.7	10.7	12.1	11.2	10.6	10.0
Mohave	70.4	113.9	8.7	5.1	4.7	6.0	7.3	9.6	10.2	13.3	17.9
Navajo	8.8	8.4	5.4	6.1	6.9	7.2	8.5	7.6	6.8	6.4	7.6
Pima	10.0	9.2	6.8	7.8	11.2	11.9	10.9	9.1	9.8	10.1	8.9
Pinal	24.7	16.8	8.5	8.3	10.9	9.0	10.4	9.2	8.2	8.4	7.9
Santa Cruz	52.9	51.7	24.2	20.9	26.1	18.3	15.2	12.9	12.9	10.7	10.9
Yavapai	12.4	10.9	7.3	8.5	10.3	9.5	9.0	10.1	9.7	9.2	8.1
Yuma	387.4	307.1	29.4	17.5	15.7	49.7	28.5	22.3	22.0	22.2	21.6

[1] Per 1,000 estimated midyear population
[2] Preliminary

TABLE 10-3

MARRIAGES[1] BY COUNTY OF OCCURRENCE, BY MONTH, ARIZONA, 1988

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Apache	12	15	16	8	12	18	25	21	15	8	28	14	192
Cochise	68	65	84	79	47	100	51	88	91	63	79	72	887
Coconino	42	40	66	68	86	131	77	125	110	82	81	68	976
Gila	21	32	22	34	28	35	31	33	33	29	34	46	378
Graham	20	12	22	20	35	30	31	23	24	16	12	32	277
Greenlee	5	7	2	9	4	4	9	5	3	3	2	3	56
La Paz	14	9	17	24	22	24	9	10	18	16	12	11	186
Maricopa[2]	1,469	1,072	2,138	2,189	2,191	2,070	1,559	1,130	1,510	1,766	1,867	1,649	20,610
Mohave	70	110	118	136	143	188	68	120	131	115	117	140	1,456
Navajo	65	42	46	45	31	53	49	78	39	41	43	59	591
Pima	465	429	563	550	575	580	373	489	538	540	499	487	6,088
Pinal	73	67	83	57	77	93	76	68	82	64	72	60	872
Santa Cruz	27	29	34	20	19	46	25	32	23	19	32	23	329
Yavapai	69	68	52	52	52	65	65	58	78	74	66	90	789
Yuma	181	181	158	169	170	100	150	158	162	172	157	216	1,974
Monthly Total	2,601	2,178	3,421	3,460	3,492	3,537	2,598	2,438	2,857	3,008	3,101	2,970	35,661

[1] Marriages recorded unless otherwise indicated

[2] Marriage licenses issued

TABLE 10-4

DISSOLUTIONS OF MARRIAGE BY COUNTY OF OCCURRENCE, ARIZONA, 1950-1988

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987	1988
ARIZONA	4,062	3,581	4,780	8,575	13,298	17,577	19,858	21,157	23,062	23,760	24,928
Apache	43	23	24	27	34	35	82	110	136	88	68
Cochise	131	178	156	286	403	657	666	669	802	713	691
Coconino	81	48	141	185	280	380	432	578	458	520	471
Gila	117	129	86	167	219	315	259	239	235	233	260
Graham	59	54	50	90	131	192	157	203	133	167	141
Greenlee	54	60	32	39	55	84	52	35	19	39	38
La Paz	-	-	-	-	-	-	-	77	74	64	93
Maricopa	2,483	1,581	2,724	5,448	8,023	9,826	11,187	12,626	14,409	15,185	16,400
Mohave	44	88	26	77	126	342	457	563	558	519	535
Navajo	75	66	64	194	140	224	212	258	360	236	269
Pima	580	883	987	1,248	2,703	3,772	4,141	3,911	3,992	4,086	3,923
Pinal	127	141	142	308	449	531	744	622	644	618	673
Santa Cruz	27	12	22	51	42	73	106	84	92	109	129
Yavapai	119	114	137	174	216	351	543	523	544	619	611
Yuma	122	204	189	281	477	795	820	659	606	564	610

TABLE 10-5

DISSOLUTIONS OF MARRIAGE RATES[1] BY COUNTY OF OCCURRENCE, ARIZONA, UNITED STATES, 1950-1988

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987	1988
U.S.	2.6	2.3	2.2	2.5	3.5	4.8	5.2	5.0	5.0	4.8[2]	4.8[2]
ARIZONA	5.4	3.7	3.7	5.4	7.5	7.9	7.3	6.6	6.9	6.8	6.9
Apache	1.5	0.8	0.8	0.8	1.1	0.9	1.6	1.9	2.2	1.4	1.1
Cochise	4.2	4.3	2.8	5.1	6.5	8.8	7.7	6.9	8.2	7.1	6.7
Coconino	3.4	1.5	3.4	3.7	5.8	5.8	5.8	6.7	5.1	5.7	5.0
Gila	4.8	5.2	3.3	6.0	7.5	9.7	7.0	6.3	5.9	5.8	6.4
Graham	4.5	4.0	3.6	5.7	7.9	9.5	6.9	8.7	5.4	6.8	5.7
Greenlee	4.2	4.9	2.8	3.7	5.3	7.1	4.6	4.0	2.0	4.0	4.0
La Paz	-	-	-	-	-	-	-	5.3	5.2	4.5	6.5
Maricopa	7.5	3.3	4.1	6.4	8.3	8.1	7.4	7.0	7.5	7.6	7.9
Mohave	5.2	4.0	3.4	5.1	4.9	9.1	8.2	7.8	7.2	6.5	6.6
Navajo	2.5	2.0	1.7	4.4	2.9	3.9	3.1	3.6	4.9	3.1	3.5
Pima	4.1	4.5	3.7	4.0	7.7	8.6	7.8	6.3	6.2	6.2	5.7
Pinal	2.9	2.7	2.3	4.8	6.5	6.1	8.2	6.2	6.2	5.8	6.1
Santa Cruz	2.9	1.2	2.0	3.8	3.0	4.2	5.2	3.1	3.3	3.7	4.3
Yavapai	4.8	4.3	4.7	5.3	4.8	7.1	8.0	5.9	5.9	6.5	6.2
Yuma	4.4	5.7	4.1	5.0	7.8	11.3	9.1	7.3	6.9	6.3	6.7

[1] Per 1,000 estimated midyear population.

[2] Preliminary

TABLE 10-6

DISSOLUTIONS[1] OF MARRIAGE BY COUNTY OF OCCURRENCE, BY MONTH, ARIZONA, 1988

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTA
Apache	6	6	4	2	5	4	5	5	6	12	5	8	68
Cochise	62	64	66	65	62	19	70	63	58	66	48	48	691
Coconino	27	40	31	33	43	41	24	33	49	39	40	71	471
Gila	12	14	17	24	30	23	22	28	24	30	11	25	260
Graham	13	12	3	8	8	18	9	13	11	14	21	11	141
Greenlee	1	2	5	5	3	2	2	6	2	4	1	5	38
La Paz	6	6	12	10	10	10	1	8	2	3	7	18	93
Maricopa	1,126	1,278	1,240	1,340	1,483	1,291	1,422	1,422	2,176	1,117	1,229	1,276	16,400
Mohave	58	67	47	51	54	18	34	50	37	39	39	41	535
Navajo	25	16	27	22	9	30	23	38	19	26	21	13	269
Pima	319	253	328	320	329	325	320	371	323	365	344	342	3,939
Pinal	63	46	74	60	48	50	58	45	55	70	28	76	673
Santa Cruz	12	7	7	18	10	9	11	13	10	9	9	14	129
Yavapai	60	53	44	44	44	44	73	45	37	47	64	56	611
Yuma	57	60	52	37	44	29	30	32	49	79	53	88	610
Monthly Total	**1,847**	**1,924**	**1,957**	**2,039**	**2,182**	**1,913**	**2,104**	**2,172**	**2,858**	**1,920**	**1,920**	**2,092**	**24,928**

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[1] Divorces and annulments granted.

PREGNANCY AND ABORTION STATISTICS

TABLE 11-1

INDUCED ABORTIONS PERFORMED IN ARIZONA BY COUNTY OF RESIDENCE,[1] ARIZONA RESIDENTS, 1977-88

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986[2]	1987	1988
ARIZONA	5,896	6,616	7,620	8,959	10,047	11,965	13,081	13,909	14,537	14,455	15,615	14,350
Apache	74	93	94	33	34	39	35	26	45	24	23	23
Cochise	150	120	94	138	152	220	252	249	279	264	270	207
Coconino	206	269	279	374	326	389	422	394	313	263	390	459
Gila	57	51	55	60	79	84	73	62	69	50	49	44
Graham	18	21	21	37	22	30	31	20	26	20	15	18
Greenlee	10	13	9	12	8	17	11	15	17	17	30	27
La Paz	NA	NA	NA	NA	NA	NA	17	14	11	11	9	12
Maricopa	3,782	4,233	5,645	5,861	6,609	7,989	8,501	9,646	10,035	10,387	12,011	10,918
Mohave	25	28	44	44	27	34	21	50	24	37	20	52
Navajo	59	67	59	72	62	104	100	59	60	42	44	65
Pima	1,140	1,359	979	1,897	2,316	2,553	3,097	2,876	3,152	2,915	2,282	2,059
Pinal	204	152	150	199	166	227	251	164	182	179	187	205
Santa Cruz	46	40	32	42	43	53	49	57	58	52	53	51
Yavapai	46	92	100	135	170	186	169	139	141	103	150	132
Yuma	79	78	59	55	33	40	52	138	125	91	82	78

[1] Excludes records with unknown place of residence, and records of out-of-state residents
[2] The 1986 values were revised and, therefore, differ from those previously published.

TABLE 11-2

CHARACTERISTICS OF WOMEN RECEIVING ABORTIONS, ARIZONA, 1983-1988

	1983	1984	1985	1986[1]	1987	1988
TOTAL ABORTIONS PERFORMED IN ARIZONA	13,664	14,874	15,604	15,803	17,138	15,922
RESIDENCE						
Resided in state	13,081	13,909	14,537	14,455	15,615	14,350
Resided out-of-state	576	362	403	977	1,234	1,302
Not stated	7	603	664	371	289	270
AGE[2]						
19 years and under	3,483	3,422	3,617	3,216	3,504	3,282
20-24 years	5,008	5,637	5,800	5,000	5,393	4,640
25 years and over	4,640	5,340	5,747	5,807	6,364	5,994
Not stated	533	475	440	432	354	434
MARITAL STATUS[2]						
Married	2,526	2,841	2,910	2,715	3,719	3,304
Unmarried	10,603	11,254	11,906	10,944	10,850	9,835
Not stated	535	779	788	796	1,046	1,211
ETHNIC GROUP[2]						
White	10,854	12,816	13,553	12,506	13,350	11,992
Non-white	2,113	1,329	1,411	1,275	1,326	1,243
Not stated	697	729	640	674	939	1,110
YEARS OF EDUCATION[2]						
8 years or less	342	488	550	471	443	359
9-16 years	11,736	13,058	13,637	12,540	13,742	12,129
17 years or more	393	623	665	588	545	517
Not stated	1,193	705	752	756	885	1,345
PREVIOUS LIVE BIRTHS[2]						
None	8,150	8,597	8,892	7,852	8,248	7,464
1 or more	5,514	6,277	6,712	6,603	7,367	6,885

	1983	1984	1985	1996[1]	1987	1988
FACILITY[2]						
Clinic	9,009	9,715	9,862	8,112	9,735	9,379
Doctor's Office	4,623	4,111	5,011	5,461	4,831	3,789
Hospital	27	64	43	40	40	31
Not stated	5	984	688	842	1,009	1,151
TYPE OF PROCEDURE[2]						
Curretage	13,365	14,669	15,175	14,140	15,306	14,087
Intrauterine Instillation	-	-	-	1	-	-
Hysterectomy/Hysterotomy	-	1	-	-		-
Not stated	299	204	429	314	541	263
WEEKS OF GESTATION[2]						
12 weeks or under	11,784	12,937	13,415	12,325	13,689	12,680
13 weeks or over	1,712	1,937	1,952	1,880		1,522
Not stated	168	-	237	250	155	148
PREVIOUS INDUCED ABORTIONS[2]						
None	9,172	9,798	10,201	9,217	9,856	9,045
1	3,229	3,611	3,747	3,607	4,025	3,616
2 or more	1,263	1,465	1,656	1,631	1,734	1,689
COMPLICATIONS[2]						
No	13,650	14,869	15,595	14,440	15,594	14,344
Yes	14	5	9	5	21	6
REASON FOR TERMINATION[2]						
Elective	13,328	14,611	15,274	14,300	15,228	14,068
Medical	14	23	16	7	11	11
Not stated	322	240	314	148	376	211

[1] Figures for 1986 include revisions received by the Arizona Department of Health Services and, therefore, may differ from those previously published.

[2] Since 1986 all frequencies are shown for Arizona residents.

TABLE 11-3

AGE-SPECIFIC NUMBER AND RATES OF LIVE BIRTHS (B) AND ABORTIONS (A), ARIZONA, 1983 - 1988[1]

AGE GROUP	1983		1984		1985		1986[2]		1987		1988	
	B	A	B	A	B	A	B	A	B	A	B	A
Under 15												
Number	123	101	110	84	110	116	152	99	142	91	160	75
Rate	1.1	0.9	1.0	0.7	0.9	1.0	1.3	0.9	1.2	0.7	1.3	0.6
15-19												
Number	7,686	3,382	7,513	3,338	7,916	3,501	8,224	3,118	8,633	2,873	8,883	3,207
Rate	65.9	26.6	63.6	28.6	67.0	29.6	66.7	25.0	69.1	27.4	69.9	25.2
20-24												
Number	18,046	5,008	18,772	5,637	19,721	5,800	19,505	5,000	19,334	4,622	19,372	4,640
Rate	132.8	36.8	137.4	41.3	144.8	42.6	142.9	36.6	142.5	39.8	142.8	34.2
25-29												
Number	15,880	2,796	16,582	3,125	17,979	3,251	18,562	3,313	19,712	3,021	20,513	3,265
Rate	117.2	20.6	116.7	22.0	118.8	20.6	117.8	21.0	122.6	22.5	126.2	20.1
30-34												
Number	8,224	1,250	8,980	1,444	9,990	1,636	10,505	1,600	11,206	1,455	11,912	1,788
Rate	67.6	10.5	70.1	11.5	73.8	11.5	74.1	11.3	74.7	12.2	75.2	11.3
35-39												
Number	2,526	464	2,711	622	3,126	686	3,357	735	3,736	661	4,062	778
Rate	25.6	4.7	25.6	5.9	27.0	5.6	23.7	6.0	29.3	5.8	30.5	5.8
40-44												
Number	409	120	420	143	483	160	497	155	534	138	622	155
Rate	5.2	1.5	5.0	1.7	5.5	1.7	5.2	1.8	5.2	1.7	5.7	1.4
45 & over												
Number	22	10	20	6	15	14	17	12	22	14	18	8
Rate	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.1
TOTAL												
Number[3]	52,919	13,664	55,109	14,874	59,344	15,604	60,822	14,455	63,320	13,291	65,544	14,350
Rate[4]	77.1	19.6	77.2	20.9	79.6	19.7	78.2	18.6	79.0	19.5	79.3	17.4

[1] The age-specific live birth or abortion rate is the number of live births or abortions per 1,000 females in a specific age group. For females under 15 the calculated rate includes female population 10-14 years of age. For women over 44 the rate is calculated for the female population 45-49 years of age.

[2] The 1986 values were revised and, therefore, differ from those previously published.

[3] The total includes records with unspecified age and is not the sum of the age groups.

[4] The value for live births is the general fertility rate. It is computed by dividing the total number of live births, regardless of age of mother, by the population of women of childbearing age (15-44 years of age). The total abortion rate is computed of women of childbearing age (15-55 years old).

TABLE 11-4

NUMBER OF WOMEN HAVING ABORTIONS PER 1,000 WOMEN GIVING BIRTH,[1] BY COUNTY OF RESIDENCE, ARIZONA, 1983-1988

COUNTY OF RESIDENCE	1983	1984	1985	1986[2]	1987	1988
Apache	19.6	14.3	24.3	13.7	12.4	12.2
Cochise	161.0	153.9	179.0	173.2	168.1	126.4
Coconino	233.4	217.3	160.8	143.9	194.1	233.5
Gila	106.9	92.3	107.5	80.0	86.1	66.8
Graham	71.3	44.8	64.0	50.6	33.7	43.1
Greenlee	59.5	76.9	105.6	160.4	241.9	243.2
La Paz[3]	NA	71.8	47.0	51.2	45.5	56.1
Maricopa	295.6	314.1	297.1	292.3	328.0	286.5
Mohave	22.7	50.6	24.8	34.7	17.0	42.4
Navajo	52.3	31.6	31.7	22.2	22.2	33.2
Pima	323.1	297.2	306.7	279.7	208.9	183.6
Pinal	134.3	88.7	88.8	87.2	88.0	97.9
Santa Cruz	107.2	111.3	110.9	103.2	96.9	76.7
Yavapai	158.4	139.1	129.6	91.2	128.1	102.7
Yuma	30.9	78.8	63.7	46.2	41.6	37.2
ARIZONA, TOTAL:	258.2	269.9	262.9	237.7	246.6	218.9

[1] Ratios are calculated by relating county-specific number of resident abortions to county-specific number of resident live births in a specified year. The number of abortions/live births by county of residence is published annually in the Arizona Health Status and Vital Statistics.

During the period from 1983-1985 all reported abortions, regardless of the place of residence, were used in calculating the overall ratio for Arizona. From 1986-1988 only records specifying Arizona as place of residence were used in calculating the overall ratios for the state.

[2] The 1986 values were revised and, therefore, differ from those previously published.

[3] Included in Yuma County until January 1, 1983.

TABLE 11-5

ABORTIONS BY AGE AND COUNTY OF RESIDENCE
ARIZONA, 1988

		AGE									
COUNTY	ALL AGES	UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	UNKNOWN AGE
ARIZONA	14,350	75	1,126	2,081	4,640	3,265	1,788	778	155	8	434
Apache	23	0	2	1	7	8	3	2	0	0	0
Cochise	207	0	19	23	62	47	33	7	1	0	15
Coconino	459	0	38	71	139	98	61	32	8	0	12
Gila	44	0	4	6	8	12	7	5	2	0	0
Graham	18	0	5	3	3	1	2	2	0	0	2
Greenlee	27	1	2	2	8	9	2	1	0	0	2
La Paz	12	0	4	0	5	1	2	0	0	0	0
Maricopa	10,918	60	849	1,615	3,630	2,545	1,357	585	109	6	162
Mohave	52	0	3	10	15	11	7	5	0	0	1
Navajo	65	1	8	7	17	17	10	3	1	0	1
Pima	2,059	9	147	271	621	425	232	100	27	1	226
Pinal	205	1	24	37	56	43	22	16	0	1	5
Santa Cruz	51	0	2	6	13	10	12	3	0	0	5
Yavapai	132	3	9	16	29	29	27	12	6	0	1
Yuma	78	0	10	13	27	9	11	5	1	0	2

TABLE 11-6

ABORTIONS BY WEEK OF GESTATION OF PREGNANCY AND AGE OF WOMAN, ARIZONA, 1988

Weeks of Gestation	Age								
	< 15	15-19	20-24	25-29	30-34	35-39	40+	Unknown	Total
8	23	1,182	1,988	1,512	919	404	80	164	6,272
9	8	489	711	524	296	119	24	83	2,254
10	10	480	639	475	215	100	26	73	2,018
11	8	309	383	234	128	52	10	37	1,161
12	12	263	326	202	88	42	11	31	975
13	2	120	159	77	31	14	2	11	416
14	3	107	143	73	31	13	3	10	383
15	0	36	41	19	11	5	0	1	113
16	3	50	54	33	14	5	1	3	163
17	2	40	41	28	17	3	0	3	134
18	1	36	46	15	13	7	2	2	122
19	1	30	27	22	5	2	0	0	87
20	0	16	18	11	4	4	0	0	53
21+	0	16	19	9	4	1	1	1	51
Unknown	2	33	17	45	31	12	10	15	148
Total	75	3,207	4,640	3,265	1,788	778	163	434	14,350

TABLE 11-7

PREGNANCY RATES, NUMBER OF LIVE BIRTHS, FETAL DEATHS AND ABORTIONS BY AGE GROUP, ARIZONA, 1988

					PREGNANCIES			
AGE	ESTIMATED FEMALE POPULATION	LIVE BIRTHS	FETAL DEATHS	INDUCED ABORTIONS	NUMBER	RATE[1]	PERCENT ENDING IN ABORTION	ABORTION RATIO[2]
UNDER 15	123,823	160	1	75	236	1.9	31.8	468.8
15-19	127,146	8,883	59	3,207	12,149	95.6	26.4	361.0
20-24	135,617	19,372	111	4,640	24,123	177.9	19.2	239.5
25-29	162,492	20,513	126	3,265	44,543	274.1	7.3	159.2
30-34	158,361	11,912	68	1,788	13,768	86.9	13.0	150.1
35-39	133,343	4,062	47	778	4,887	36.6	15.9	191.5
40-44	109,678	622	5	155	782	7.1	19.8	249.2
45 AND OVER	89,308	18	-	8	26	0.3	30.8	444.4
Unknown age	-	2	2	434	438	-	-	-
TOTAL	826,687[3]	65,544	419	14,350	80,313	97.2	17.9	218.9

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[1] The age-specific pregnancy rate is the number of pregnancies per 1,000 women specified age group. For females under 15 the calculated rate includes the female population 10-14 years of age. For women over 44 the rate calculated includes the female population 45-49 years of age. The total pregnancy rate is computed by relating the total number of preg-nancies, regardless of age of mother, to the population of women of child-bearing age (15-44 years of age).

[2] Ratios are calculated by relating age-specific number of resident abortions to the age-specific number of resident live births.

[3] Estimated female population of childbearing age in Arizona in 1988. Popu-lation estimates for females under 15 and over 44 are excluded from the total population of women of childbearing age.

TABLE 11-8

PREGNANCY RATES AND NUMBER OF BIRTHS, FETAL DEATHS AND ABORTIONS TO TEENS BY COUNTY OF RESIDENCE AND AGE GROUP, ARIZONA, 1988

County of Residence	Under 15				15 - 17				18 - 19				All, 19 or Less Years of Age			Total Pregnancies	
	Live Births	Fetal Deaths	Abortions	Total Pregnancies[1]	Live Births	Fetal Deaths	Abortions	Total Pregnancies	Live Births	Fetal Deaths	Abortions	Total Pregnancies	Live Births	Fetal Deaths	Abortions	Number	Rate[2]
Apache	6	0	0	6	112	0	2	114	169	1	1	171	287	1	3	291	47.2
Cochise	4	0	0	4	76	0	19	95	147	1	23	171	227	1	42	270	34.4
Coconino	5	0	0	5	86	2	38	126	157	2	71	230	248	4	109	361	49.4
Gila	0	0	0	0	46	1	4	51	75	0	6	81	121	1	10	132	40.9
Graham	2	0	0	2	24	0	5	29	43	0	3	46	69	0	8	77	35.4
Greenlee	0	0	0	0	7	0	2	9	7	1	2	10	14	1	5	20	21.0
La Paz	0	0	0	0	10	0	4	14	37	1	0	38	47	1	4	52	50.6
Maricopa	92	1	60	153	1,849	11	849	2,709	3,061	22	1,615	4,698	5,002	34	2,524	7,560	54.3
Mohave	1	0	0	1	64	0	3	67	121	0	10	131	186	0	13	199	38.6
Navajo	6	0	1	7	126	1	8	135	178	4	7	189	310	5	16	331	37.3
Pima	22	0	9	31	502	6	147	655	941	4	271	1,216	1,465	10	427	1,902	42.8
Pinal	15	0	1	16	210	1	24	235	242	0	37	279	467	1	62	530	62.0
Santa Cruz	2	0	0	2	33	0	2	35	58	0	6	64	93	0	8	101	39.0
Yavapai	1	0	3	4	55	0	9	68	137	0	16	153	197	0	28	225	37.7
Yuma	4	0	0	4	96	0	10	106	210	1	13	224	310	1	23	334	48.2
ARIZONA	160	1	75	236	3,300	22	1,126	4,448	5,583	37	2,081	7,701	9,043	60	3,282	12,385	49.3

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[1] Sum of live births, fetal deaths and induced abortions.

[2] Number of pregnancies per 1,000 females 10-19 years of age.

TABLE 11-9

PREGNANCY RATES[1] AND NUMBER OF LIVE BIRTHS, FETAL DEATHS AND ABORTIONS TO TEENS BY INDIVIDUAL AGE, ARIZONA, 1988

Age	Estimated[2] Population:	Live Births	Stillbirths (Fetal Deaths)	Induced Abortions	Total Pregnancies	
					Number	Rate
10	25,573	0	0	1	1	*
11	25,146	1	0	0	1	*
12	24,580	7	0	2	9	0.4
13	24,534	25	0	10	35	1.4
14	23,990	127	1	56	184	7.7
10-14	123,823	160	1	75[3]	236	1.9
15	24,449	448	3	151	602	24.6
16	25,607	1,042	6	373	1,421	55.5
17	26,615	1,810	13	602	2,425	91.1
15-17	76,671	3,300	22	1,126	4,448	58.0
18	25,407	2,484	16	1,065	3,565	140.3
19	25,068	3,099	21	1,016	4,136	165.0
18-19	50,475	5,583	37	2,081	7,701	152.6
TOTAL, 10-19	250,969	9,043	60	3,282	12,385	49.3

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[1] Rates per 1,000 estimated female population in specific group.

[2] Based on estimates published by the Arizona Department of Economic Security, Population Statistics Unit, 12/12/86.

[3] Includes six records with unspecified individual age.

* Quantity more than zero but less than 0.1.

TABLE 11-10

PREGNANCY RATES AND NUMBER OF LIVE BIRTHS, FETAL DEATHS AND INDUCED ABORTIONS TO TEENS (19 OR LESS YEARS OF AGE) BY ETHNICITY, ARIZONA, 1988

ETHNIC GROUP	Estimated Female Population 10-19 Years of Age:[1]	Live Births	Stillbirths (Fetal Deaths)	Induced Abortions	TOTAL PREGNANCIES:		
					Number	Rate[2]	Percent Pregnancies Ending in Abortion:
White	161,624	4,181	26	2,368	6,575	40.7	36.0
Hispanic[3]	59,228	3,099	20	424	3,543	59.8	12.0
Black	7,780	552	8	172	732	94.1	23.5
Native American	19,827	1,144	5	62	1,211	61.1	5.1
Other Race	2,510	67	1	18	86	34.3	20.9
Unknown	-	-	-	238	238	-	-
All Ethnic Groups:	250,969	9,043	60	3,282	12,385	49.3	26.5

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[1] Based on a "census-share" approach applied by the Arizona Department of Economic Security, Research Administration in generating population projections.

[2] Number of pregnancies per 1,000 females in specified group.

[3] Whites are Whites not of Hispanic origin. For the purposes of this classification Hispanics are Whites of Hispanic origin who constitute 97 percent of the Hispanic population in Arizona.

TABLE 11-11

NUMBER OF PREGNANCIES AND PREGNANCY RATES FOR ALL FEMALES AND TEENAGE FEMALES BY COUNTY OF RESIDENCE, ARIZONA, 1988

County	Estimated Female Population of Childbearing Age:[1]	TOTAL PREGNANCIES, ALL AGES		Estimated Female Population 10-19 Years Old	TEEN PREGNANCIES		
		Number	Rate[2]		Number	Rate[3]	Teen Pregnancies as a Percent of All Pregnancies
Apache	14,100	1,924	136.5	6,166	291	47.2	15.1
Cochise	23,171	1,859	80.2	7,847	270	34.4	14.5
Coconino	27,304	2,442P	89.4	7,306	361	49.4	14.8
Gila	8,227	707	85.9	3,228	132	40.9	18.7
Graham	5,212	438	84.0	2,176	77	35.4	17.6
Greenlee	2,144	141	65.8	952	20	21.0	14.2
La Paz	3,105	228	73.4	1,028	52	50.6	22.8
Maricopa	475,298	49,273	103.7	139,286	7,560	54.3	15.3
Mohave	16,775	1,284	76.5	5,149	199	38.6	15.5
Navajo	20,383	2,037	99.9	8,866	331	37.3	16.2
Pima	163,681	13,336	81.5	44,476	1,902	42.8	14.3
Pinal	22,998	2,320	100.9	8,549	530	62.0	22.8
Santa Cruz	6,768	718	106.1	2,590	101	39.0	14.1
Yavapai	18,901	1,423	75.3	5,965	225	37.7	15.8
Yuma	18,620	2,183	117.2	6,925	334	48.2	15.3
ARIZONA	826,687	80,313	97.1	250,969	12,385	49.3	15.4

[1] Females 15-44 years of age.

[2] The total pregnancy rate is computed by relating the total number of pregnancies, regardless of mother's age, to the total population of women of childbearing age (15-44 years old). The total pregnancy rate is presented as the number of pregnancies per 1,000 women 15-44 years of age.

[3] Number of pregnancies per 1,000 females 10-19 years old in specified group.

TABLE 11-12

NUMBER OF PREGNANCIES[1] AND PREGNANCY RATES[2] BY COUNTY OF RESIDENCE AND YEAR, FEMALES 15-19 YEARS OLD, ARIZONA, 1983 - 1988

Year		Arizona[3]	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
1983																	
	Number	10,964	313	278	335	161	91	31	46	6,282	171	355	1,902	459	64	199	277
	Rate	93.7	106.7	69.4	100.7	98.2	82.0	69.0	92.2	98.6	72.2	80.9	88.5	110.5	61.4	76.8	85.4
1984																	
	Number	10,667	309	229	339	148	93	41	35	6,260	157	314	1,816	415	78	159	274
	Rate	91.6	109.2	58.9	100.8	94.8	88.7	96.7	70.1	98.1	64.1	72.5	84.7	101.1	73.9	63.9	83.8
1985																	
	Number	11,315	274	236	330	153	88	33	53	6,568	144	297	1,963	463	72	177	289
	Rate	95.8	95.1	60.2	97.8	100.5	82.4	83.8	100.9	101.5	58.0	69.0	90.2	115.1	62.3	64.4	86.1
1986																	
	Number	11,342	273	258	331	130	81	22	43	6,884	169	296	1,859	442	79	167	308
	Rate	92.8	93.0	65.6	94.5	81.9	79.1	50.0	81.9	100.6	64.8	67.4	83.8	107.0	67.6	57.9	89.9
1987																	
	Number	12,055	276	300	355	124	86	32	40	7,388	170	308	1,855	483	88	200	350
	Rate	96.5	94.6	76.4	99.8	79.4	80.3	69.9	78.1	105.9	65.8	69.8	83.4	115.0	70.5	67.6	101.3
1988																	
	Number	12,090	284	265	352	131	75	18	51	7,374	198	319	1,861	513	99	221	329
	Rate	94.9	96.9	66.8	97.0	84.1	70.7	39.1	104.5	103.5	76.3	72.8	81.3	120.6	77.0	74.2	96.7
% Change in Rates 1983-1988		+1.3	-9.2	-3.7	-3.7	-14.4	-13.8	-43.3	+13.3	+5.0	+5.7	-10.0	-8.1	+9.1	+25.4	-3.4	+13.2

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[1] The sum of live births and abortions.

[2] The number of pregnancies per 1,000 females 15-19 years old in specified county.

[3] The total includes records with unspecified county of residence.

DOA
IPS

Other reports available from
The Office of Planning and Health Status Monitoring:

** Teenage Pregnancy Report, Arizona, 1983 - 1988
** Abortion Surveillance Report, Arizona, 1983 - 1988
** Injury Mortality Among Children and Adolescents, Arizona, 1983 - 1988
** Suicide Mortality, Arizona, 1983 - 1988
** Accidental Drowning Deaths, Arizona, 1983 - 1988
** Drug-Related Mortality, Arizona, 1983 - 1988
** Firearm-Related Fatalities, Arizona, 1983 - 1988

- Causes of Infant Death by Region, 1973 - 1987
- Deaths From Major Respiratory Causes, 1985 - 1986
- Patterns of Premature Mortality, 1970 - 1985
- Arizona Health Status and Vital Statistics, 1987
- Arizona Health Status and Vital Statistics, 1986
- Accidental Deaths in Arizona, Research Notes, Vol.2, No.1, June 1986
- Suicide in Arizona, Research Notes, Vol.2, No.1, June 1986
- Health Effects of Air Pollution in Two Phoenix Neighborhoods, Research Notes, Vol.1, No.2, December 1985
- Risk Factors for Low Birthweight Babies: The Arizona Experience 1969 to 1983, Research Notes, Vol.1, No.1, March 1985

** - indicates that prior reports for 1982 - 1987 are also available.

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